

		<p>वेस्टर्न कोलफील्ड्स लिमिटेड Western Coalfields Limited (मिनीरत्न कंपनी) (A Miniratna Company) (A Subsidiary of Coal India Limited)</p>	
<p>5 DECADES OF UNEARTHING ENERGY</p>		<p>ANGARA- Official mascot of Coal India Limited</p>	
<p>उपक्षेत्रीय प्रबंधक कार्यालय, घोरावाडी कोलियरी न.2 -तानसी उपक्षेत्र, पो. घोरावाडी, जिला-छिन्दवाडा(म.प्र.) ४८०५५५ CIN- U10100MH1975GOI018626</p>		<p>OFFICE OF THE SUB AREA MANAGER, GHORAWARI-TANDSI SUB AREA PO- Ghorawari, Distt. Chhindwara (MP) 480555</p>	
<p>पंजी.कार्या.:कोल इस्टेट, सिविल लाइन्स, नागपुर -४४०००१</p>		<p>Regd. Office: Coal Estate, Civil lines, Nagpur-440001</p>	
<p>सन्दर्भ:- वेकोलि/कन्हान/घोरा.ता.उ.क्षे/उप.क्षे.प्र /2026/200</p>		<p>दिनांक- 25.05.2026</p>	

प्रति,

1.Regional Officer,
Integrated Regional Officer(Bhopal),MOEF&CC,
Kendriya Paryavarn Bhavan, Link Road No.3,
E-5,Ravishankar Nagar, Bhopal-462016(M.P)

2. Director (Monitoring Cell), MOEF&CC,
Indira Paryavarn Bhayan,Jorbag Road,Aligunj,
New Delhi-110003

विषय: Submission of Six Monthly EC Compliance Report of Nandan UG Mine (EC letter no J-11015/237/2005-IA-II(M) Dated 17.10.2006 For production Capacity 0.405 MTPA in Area of 543.50 HA) for the period of Oct-2025 to March 2026 .

महोदय,

Reference to the above subject, please find enclosed herewith Six Monthly EC Compliance Report of Nandan UG Mine of Kanhan Area, WCL for the period of Oct-2025 to March 2026 for kind perusal.

(Handwritten Signature)
उपक्षेत्रीय प्रबंधक
घोरावाडी तानसी उपक्षेत्र

प्रतिलिपि:

1. महाप्रबंधक (माइनिंग)/विभागाध्यक्ष (पर्यावरण) वेकोलि मुख्यालय, नागपुर
2. क्षेत्रीय महाप्रबंधक, कन्हान क्षेत्र
3. क्षेत्रीय नोडल अधिकारी(पर्यावरण), कन्हान क्षेत्र

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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-2025 TO MARCH-2026

Western Coalfields Ltd.



Present Status
Kanhan Area
Nandan U/G
(0.405 MTPA)

Sl.No	Contents
1.	Data Sheet
2.	Information about mine, Status of EMP provision, Status of compliances
3.	EC Clearance letter
4.	Compliance Status of Environmental Clearance Condition
5.	Newspaper Advertisement Publication (0.405 MTPA)
6.	Plantation map
7.	Copy of Accreditation Certificate of Environmental Laboratory
8.	Consent to Operate (CTO) letter obtained from MPPCB
9.	Production Details
10.	Environment Monitoring Reports for the period of Oct'25 to Mar'26
11.	Ground water Monitoring Reports for the period Oct'25 to Mar'26
12.	Copy of Approval letter-Mine Closure Plan
13.	Copy of Approved Mine Closure Plan

DATA SHEET

Sr No.	Particulars	Details
1	Project type : RiverValley/ Mining/ Industry/ Thermal/Nuclear/Other (Specify)	Coal Mining
2	Name of Project	Nandan U/G
3	Clearance letter(s) OM No. & date	MOEF No.J-11015/237/2005/IA.II(M) Dated 17-10-2006
4	Location a) Districts b) State(S) c) Location Latitude/ Longitude	Chhindwara Madhya Pradesh 22° 11' 35" to 22° 14' 08" N 78° 23' 59.4" to 78° 28' 54" E
5	Address for correspondence a) Address of the Concerned Project Chief Engineer (With Pin Code & telephone/telex/fax numbers b) Address of the Executive/Project Engineer/ Manager (With Pin Code & telephone/telex/fax numbers	Sub Area Manager Office of Sub-Area manager, Ghorawari Sub-Area Kanhan Area, WCL Post – Ghorawari, Pin – 480551 District : Chhindwara(M.P.) 07160-264313 Mine Manager, Nandan II UG Mine Kanhan Area, WCL Post – Nandan, Pin – 480554 District : Chhindwara(M.P.) 07160-264313

6	a) Salient Features of the Project	<p>i) Production Capacity : 0.405 MTPA</p> <p>ii) Total Lease Area : 543.50 Ha Agri. Land : 305.93 Ha Forest Land : 206.20 Govt. Land : 31.37 Total : 543.50 Ha</p> <p>iii) Break up of Land a) Mining Right : 508 Ha b) Surface Right : 35.5 Ha</p> <p>iv) Work Force :- 65 Nos</p> <p>v) Balance Life : Discontinued since 01-07-2013</p> <p>vi) Capital Out Lay : 1788.59 Lakhs</p> <p>vii) Method of Mining : Board & Pillar</p>
	b) Salient Features of the Environmental Management Plans	<p>i) PH held on 12-02-2002</p> <p>ii) No objection certificate of 0.405 MTPA issued by MPPCB on 02-05-02</p> <p>iii) Environment Clearance for 0.405 Mty coal production issued by MOEF vide letter No.J-11015/237/2005 IA.II(M) Dt : 17-10-2006</p> <p>iv) Application for EC for extension of Nandan UG mine lease area (increase in land area from 543.50 Ha to 656.14 Ha.) with same capacity (0.405 MTPA) has been made to MoEF.</p> <p>iv) PH conducted on 13.07.2017</p> <p>v) Plantation/Green Belt a) Around Colony & Infrastructure: 2500 Nos/Ha. b) Vacant land : 2500 Nos/Ha</p> <p><u>vi) Pollution Control Measures</u></p> <p>a) <u>Air Pollution Control Measures</u></p> <p>i) Plantation along service road, vacant land, township, & industrial complex</p> <p>ii) Fixed water sprinklers are provided on road, bunker, coal stock yard.</p> <p>iii) Concrete road provided.</p> <p>iv) Regular water sprinkling is being done on coal transport by mobile tanker.</p> <p>v) Transportation truck covered by Tarpaulin.</p>

		<p>b) <u>Water Pollution Control Measures</u></p> <p>1) Sedimentation tank provided for mine water treatment 2) Septic tank and soak pit provided for domestic waste water.</p> <p>c) <u>Noise Pollution Control Measures</u></p> <p>1) Maintenance of transport Vehicle 2) Development of green belt in between industrial complex & residential area 3) Noise absorbing pads for noise generating machine, ear plugs & helmets to the workers.</p> <p>d) <u>Control of ground water depletion</u></p> <p>Creation of ponds for storage of treated mine water for recharging ground water table.</p> <p>e) <u>Disaster management Plan.</u></p> <p>f) <u>Progressive Mine Closure Plan</u></p> <p>g) <u>Monitoring & Management Organisation</u></p>
7	<p>Breakup of the project Area</p> <p>a) Submergence area : forest & non-forest b) Others</p>	<p>a) Nil b) Forest : 206.20 HA Agriculture : 305.93 Ha Govt. Land : 31.37 Ha</p>
8	<p>Break up of the project affected population with enumeration of those losing house/ dwelling units only agricultural land only both dwelling units & agricultural land & landless labourers/artisans</p> <p>a) SC, ST/Divas b) Others</p>	<p>Existing Mine, land already in possession hence not applicable</p>
9	<p>Financial Details</p> <p>a) Project cost as originally planed & subsequent revised estimate and the year of price reference</p> <p>b) Allocation made for environmental management plans with item wise & year wise break up</p> <p>c) Benefit cost ratio/Internal rate of items of refund & year of assessment</p>	<p>Rs. 1788.59 Lakhs</p> <p>a) Plantation b) Environmental Monitoring c) Socio-Economic Welfare Measures d) Misc. Pollution Control Measures till compliance of statutory obligation like consent to operate fee, water cess payment,</p>

	<p>d) Whether (c) includes the cost of environmental management as shown in above</p> <p>e) Actual expenditure incurred on the environmental management plans so far</p>	<p>authorizations under different Legislations.</p> <p>Yes</p> <p>Rs. 82.09 Lakhs since 2009-10 (Excluding eco-development works)</p>
10	<p>Forest land requirement</p> <p>a) The status of approval for diversion of forest land for non-forestry land</p> <p>b) The status of clearing/felling</p> <p>c) The status of compensatory afforestation, if any</p> <p>d) Comments on the viability & sustainability of compensatory afforestation programme in the light of actual field experience so far</p>	<p>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 for FC for 57.618 Ha is pending with MoEF&CC, New Delhi</p>
11	<p>The status of clear felling in non-forest areas (such as submergence area of reservoir, approach road etc) if any with quantitative information required</p>	<p>Not Applicable</p>
12	<p>Status of construction (Actual & or planned)</p> <p>a) Date of commencement (Actual & or planned)</p> <p>b) Date of completion (Actual & or planned)</p>	<p>Existing mine, already commenced</p> <p>Nandan U/G is pre-nationalization mine operating before 1974 (taken over mine since 01.04.1974)</p>
13	<p>Reason for delay, if project is yet to start</p>	<p>Project already started, Project discontinued since 01-07-2013 & applied for EC with enhanced lease area of 112.64 Ha for extension into Dhau North Block with the same capacity of 0.405 MTPA.</p>
14	<p>Date of site visit</p> <p>a) Date on which the project was monitored by the Regional office on previous occasions if any site visit</p> <p>b) Date of site visits for this Monitoring Report</p>	<p>---</p>
15.	<p>Details of correspondence with project Authorities for obtaining act on plans/information on status of compliance to safeguards other than the routine letters for logistic support for site visits).</p>	<p>----</p>

PART- I

1.	Name of project	Nandan UG Coal Mine
2.	Location & address	Village-Nandan,, Post Office – Nandan Dist.- Chhindwara (MP) - 480554
3.	Address for correspondence	Mine Manager Nandan UG Mine no. 2, PO- Nandan Chhindwara (MP) - 480554
4.	MOEF's Clearance Letter No.	J-11015/237/2005-IA-II(M) Dated 17.10.2006
5.	Period of status report	01stOct 2024 to 30st March 2025
6.	Date of last report submission	01stOct 2023 TO 31stMarch-2024
7.	Date of commencement of project work.	Pre-nationalization mine, taken over by CIL since 01.04.1974

Status of Land Acquisition

:

Sl No	Type of land	Required as per EMP(Ha)	Actual Acquired (Status as on 30.09.2016)
1.	Govt Land	31.37 Ha	31.37 Ha
2.	Forest Land	206.20 Ha	-
4.	Agriculture land	305.93 Ha	305.93 Ha
	Total	543.50 Ha	337.30 Ha (old Mine, land already acquired)

STATUS OF LEGAL COMPLIANCES

a.	Consent under water (Prevention and Control of Pollution) Act 1974 & Air(Prevention and Control of Pollution) Act 1981	Mine not Operational at present. CTO granted vide Consent no. 61222 dated 21/10/2024 valid till 30/09/2025.
c.	Environment (Protection) Act.1986	N.A; Environment Audit statement submitted every year, Last submitted on MPPCB XGN portal for 2024-25
d.	Forest (Conservation) Act. 1980	Applied for FC for forest land area of 57.618 Ha for expansion into Dhau North.

:: PART – II ::

(STATUS OF ENVIORNMENT)

AIR POLLUTION CONTROL

a.	No. of ambient Air monitoring stations	Four Nos.
b.	Name of the location As per monitoring of December 2016	1. SAM Office – Nandan I UG 2. Pit Office – Nandan II UG 3. Health Centre – Nandan UG 4. Nandan Water Filter Plant

WATER POLLUTION CONTROL:-

a.	No. of station & frequency	One (Mine water discharge) - Monitoring frequency – once in every fortnight days as per GSR 742 (E) dated 25.09.2000 Mine not in operation at present
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:: PART – III ::

:: STATUS OF IMPLEMENTATION OF PROVISION OF E. M. P. ::

Land use status

Sl No	Particulars	As perEMP currentYear	Progressive
1.	Area Excavated (Ha)	---	Not Applicable since this is U/G Mine.
2.	Top soil removed (Ha)	----	Not Applicable since this is U/G Mine.
3.	Overburden removed (MM) ³	---	Not Applicable since this is U/G Mine.
4.	Overburden backfilling (MM) ³	---	Not Applicable since this is U/G Mine.
5.	Overburden dumping (MM) ³	---	Not Applicable since this is U/G Mine.
6.	Area recovered for reclamation (physical Reclamation)	---	Not Applicable since this is U/G Mine.
7.	Area reclaimed Biologically tree plantation on back filled area.	---	Not Applicable since this is U/G Mine.
8.	Approved Production Capacity	0.405MT/A	
9.	Present Capacity	Nil Mine not in operation at present; Applied for EC& FC for enhanced land area of 112.64 Ha	

Rehabilitation and Resettlement

01	No. of land Oustees	Old Mine, operational prior to 1974
02	No. of land Oustees rehabilitated	
03	No. of PAPS/ PAFS to be resettled	
04	No. of PAPS/PAFS resettled	

ORGANISATION SETUP AT PROJECT LEVEL

Name and Designation of the personnel to be given.

Shri SK Kanth

Dy. GM (Mining), Sub Area Manager

Shri Pramod G Mohod

Chief Manager (Mining)/Mine Manager

Shri Pramod G Mohod

Sr. Manager (Mining)/ NO(Environment)

No.J-11015/237/2005-IA.II(M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
C.G.O.Complex, Lodi Road,
New Delhi -110003.

Dated: 17th October 2006

To
Head of Department Env./CE(Civil),
Environment Department,
M/s Western Coalfields Ltd.,
Coal Estate, Civil Lines,
NAGPUR - 440001.

Sub: Nandan Underground Coal Mine Project (0.405 MTPA) of M/s Western Coalfields Ltd. (WCL), located in village Chikatbarri, Tehsil Junnardeo, District Chhindwara, Madhya Pradesh- Environmental clearance - reg.

Sir,

This has reference to letter of Ministry of Coal & Mines No. 43011/7/2005-CPAM dated 05.07.2005 forwarding your application and letters of M/s Coal India Ltd. dated 16.01.2006, 18.05.2006 and 17.05.2006 and your letters dated 02.06.2006, 08.06.2006, and 19.07.2006 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It has been noted that the project is for production of coal in **existing Nandan Underground Coalmine Project involving a total lease area of 543.50 ha**, of which 305.93 ha is agricultural land, 206.20 ha is forestland and 31.37 ha is Govt. land. Forestry clearance has not been obtained. There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found within the core zone and in the 10 km buffer zone. The project does not involve R&R. Mining will be underground by semi-mechanised method. Controlled blasting is involved. **Rated capacity of the mine is 0.405 million tonnes per annum (MTPA) of coal production.** Mineral transportation of 1227 TPD of coal is by use of 325 coal tippers per day. Ultimate working depth of the mine is 300 m below ground level (bgl). Water table is in the range of 2.5-13m bgl in the buffer zone. Mining will intersect water table. Average water demand is 544 m³/d of water which is met from mine sump/pit water. Balance life of the mine at the rated capacity is 7 years. Public Hearing was held on 12.02.2002. NOC has been obtained on 02.05.2002. The project has been approved by M/s WCL on 18.09.1985. The capital cost of the project is **Rs. 1788.59 lakhs.**

2. The Ministry of Environment & forests hereby accords environmental clearance for the above-mentioned **Nandan Underground Expansion Coal Project of M/s WCL over a lease area of 543.50 ha for production of coal of 0.405 MTPA rated capacity** under the provisions of the Environmental Impact Assessment Notification, 2006 subject to the compliance of the terms and conditions mentioned below:

A. Specific Conditions

- (i) All the conditions stipulated by the SPCB in their NOC shall be effectively implemented.
- (ii) No mining operations shall be undertaken in the forestland until clearance has been obtained under the provisions of FC Act, 1980.
- (iii) Regular monitoring of subsidence movement 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.

- (iv) 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 an above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity should also provided adequate retention period to allow proper settling of silt material.
- (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.
- (vi) Crushers at the CHP should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.
- (vii) Drills should be wet operated only.
- (viii) Controlled blasting should be practiced with use of delay detonators.
- (ix) A progressive afforestation plan shall be prepared and implemented over the mine lease area and shall include areas under green belt development, areas along roads, infrastructure, along ML boundary and township outside 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 ha.
- (x) Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new piezometers. 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 to the Central Pollution Control Board quarterly within one month of monitoring.
- (xi) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- (xii) 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 to DGMS.
- (xiii) 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 its Regional office at Bhopal.
- (xiv) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.
- (xv) Consent to Operate shall be obtained before starting mining operations.
- (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.

B. General Conditions

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.
- (iii) Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO₂ and NO_x 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.
- (iv) Data on ambient air quality (SPM, RPM, SO₂ and NO_x) 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.
- (v) Fugitive dust emissions from all the sources 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.
- (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 19th May 1993 and 31st 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.
- (x) 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.
- (xi) 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 be 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.

- (xv) 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 <http://envfor.nic.in>.
3. The Ministry or any other competent authority may stipulate any further condition for environmental protection.
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.
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 Act, 1991 along with their amendments and Rules.

(Dr.T.Chandini)
Additional Director

Copy to:

1. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Madhya Pradesh, Secretariat, Bhopal.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arera Colony, Bhopal - 462016.
4. Chairman, Madhya Pradesh State Pollution Control Board, Parvavaran Parisar, E-5, Arera Colony, Bhopal - 462016.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Cuzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. Shri M.K. Shukla, CGM, Coal India Limited, SCOPE Minar, Core-I, 4th Floor, Vikas Marg, Laxminagar, New Delhi.
8. District Collector, Chhindwara, Government of Madhya Pradesh, New Delhi.
9. Monitoring File 10. Guard File 11. Record File

(Dr.T.Chandini)
Additional Director

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)	Specific Conditions	
I	All the condition stipulated by the SPCB in their NOC shall be effectively implemented	Being complied.
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 ³ 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="862 720 1442 1205"> <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 & 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-25 to Mar-26 is 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, Ahemedabad 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 http://103.59.142.228:8081/wclweb/TPK_CF_2020.pdf
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 31/03/25 is INR 15,27,27,912 /-
XV	Consent to operate (CTO) shall be obtained before starting mining operations.	Mine not Operational at present. CTO Granted vide Consent no. AW 61222 dated 21/10/2024 valid till 30/09/2025. Mine is not in operation since 2013,CTO renewal has been discontinued .
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)	General Conditions	
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 ₂ , NO _x & 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	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

	State Pollution Control Board.	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 ₂ , 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-25 to Mar-26 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 provided 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 conform 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 ³ is also provided for mine water treatment.
vii)	Industrial waste water(workshop & water from the mines) should be properly collected, treated so as to conform 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 ³ is also provided for mine water treatment.
viii)	Vehicular emission should be kept under control & regularly monitored. Vehicles used for transporting	Vehicles used for transporting mineral are covered with tarpaulin.

	& mineral should be covered with tarpaulin optimally loaded.	All light vehicle like jeep, school buses, 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) & Assistant 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 Http://envfor.nic.in	Copy of Advertisement enclosed
3	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
4	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
5	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



Western Coalfields Ltd.

(A Subsidiary of Coal India Ltd.)

NOTICE

1. Sub : Yekona-I Open Cast Coal Mine Project of Western Coalfields Limited located in Village Yekona, Tah. : Warora, Dist. : Chandrapur (Maharashtra)

Environmental clearance has been accorded for proposed Yekona-I Open Cast Coal Mine Project for coal production of 0.40 MTPA of Western Coalfields Limited, Majri Area and a copy of the clearance letter is available with the Maharashtra Pollution Control Board and may also be seen at website of the Ministry of Environment & Forests (MOEF) at <http://envfor.nic.in>.

2. Sub : Yekona-II Open Cast Coal Mine Project of Western Coalfields Limited located in Village Yekona, Tah. : Warora, Dist. : Chandrapur (Maharashtra)

Environmental clearance has been accorded for proposed Yekona-II Open Cast Coal Mine Project for coal production of 0.80 MTPA of Western Coalfields Limited, Majri Area and a copy of the clearance letter is available with the Maharashtra Pollution Control Board and may also be seen at website of the Ministry of Environment & Forests (MOEF) at <http://envfor.nic.in>.

3. Sub : Gajendoh Under Ground Coal Mine Project of Western Coalfields Limited located in Village - Gajendoh Tah. : Parasla, Dist. : Chhindwada (Madhya Pradesh)

Environmental clearance has been accorded for the Gajendoh Under Ground Coal Mine Project of Western Coalfields Limited, Pench Area for 0.18 million tonnes per year of coal production and a copy of the clearance letter is available with the Madhya Pradesh Pollution Control Board and may also be seen at website of the Ministry of Environment & Forests (MOEF) at <http://envfor.nic.in>.

4. Sub : Nandan Under Ground Coal Mine Project of Western Coalfields Limited located in Village - Chiklbarri, Tah. : Junnardev, Dist. : Chhindwada (Madhya Pradesh)

Environmental clearance has been accorded for the Nandan Under Ground Coal Mine Project of Western Coalfields Limited, Kanhan Area for 0.405 million tonnes per year of coal production and a copy of the clearance letter is available with the Madhya Pradesh Pollution Control Board and may also be seen at website of the Ministry of Environment & Forests (MOEF) at <http://envfor.nic.in>.

5. Sub : Mohan (Maori) Under Ground Expansion Project of Western Coalfields Limited located in Village - Ambara, Tah. : Junnardev, Dist. : Chhindwada (Madhya Pradesh)

Environmental clearance has been accorded for the Mohan (Maori) Under Ground Expansion Project of Western Coalfields Limited, Kanhan Area for 0.45 million tonnes per year of coal production and a copy of the clearance letter is available with the Madhya Pradesh Pollution Control Board and may also be seen at website of the Ministry of Environment & Forests (MOEF) at <http://envfor.nic.in>.

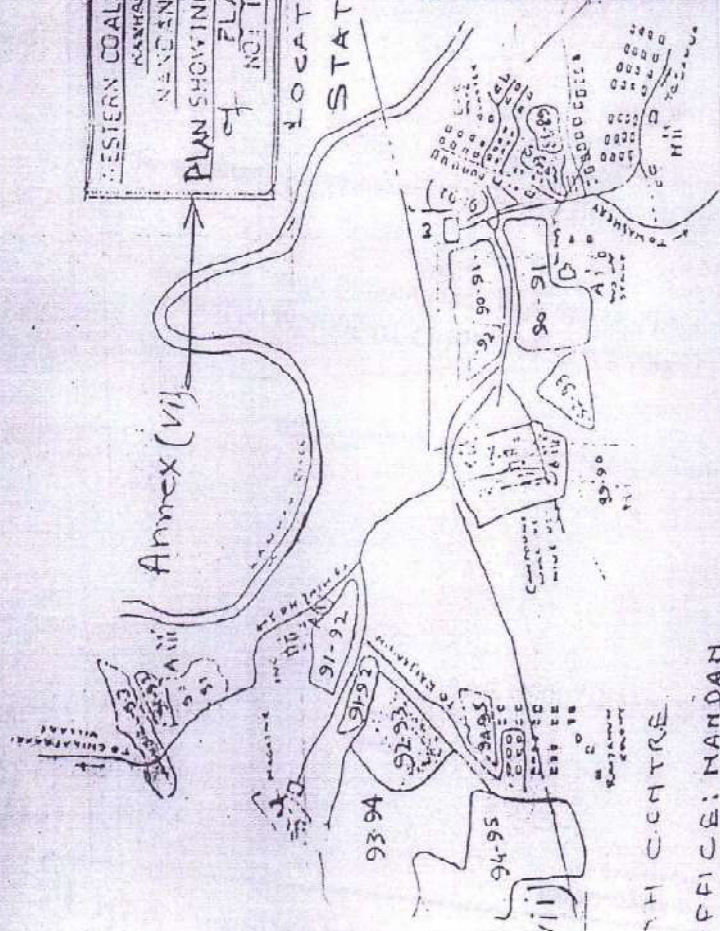
6. Sub : Expansion of Sarni Under Ground Expansion Project of Western Coalfields Limited located in Village - Sarni, Tah. : Ohoradongri, Dist. : Betul (Madhya Pradesh)

Environmental clearance has been accorded to the Sarni Under Ground Project of Western Coalfields Limited, Palakheda Area for the Expansion in lease from 386.178 ha to 509.079 ha & for 0.42 million tonnes per year of coal production and a copy of the clearance letter is available with the Madhya Pradesh Pollution Control Board and may also be seen at website of the Ministry of Environment & Forests (MOEF) at <http://envfor.nic.in>.

Mandan

WESTERN COAL FIELDS LIMITED
 NANDAN AREA
 NANDAN GROUP
 PLAN SHOWING THE SITE OF LOCATION
 of PLANTATION AND
 NOT TO SCALE

LOCATIONS OF SAMPLING
 STATIONS OF AIR WATER
 AND NOISE



DETAIL OF PLANTATION

1988 - 89	4000
1989 - 90	6775
1990 - 91	20000
1991 - 92	20000
1992 - 93	26000
1993 - 94	15000
1994 - 95	25000

MANDAN

Annex- (VII)

AIR: i) HEALTH CENTRE

ii) SAM OFFICE: NANDAN.

iii) PIT OFFICE: NANDAN

WATER: MINE WATER: BORE HOLE.

NOISE: i) FAN HOUSE.

ii) COLONY



National Accreditation Board for
Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

ENVIRONMENT LABORATORY, CMPDI

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

GROUND FLOOR, CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED, REGIONAL
INSTITUTE-IV, NAGPUR, MAHARASHTRA, INDIA

in the field of
TESTING

Certificate Number: TC-7102

Issue Date: 29/06/2024

Valid Until: 28/06/2026

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: CENTRAL MINE PLANNING & DESIGN INSTITUTE LIMITED

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer



M.P. Pollution Control Board

E-5, Arera Colony Paryavaran Parisar, Bhopal - 16 MP Tele : 0755-2466191, Fax-0755-2463742



Consent Order

RED-LARGE

CCA-Renewal

PCB ID: 15965

To, **The Occupier,**
Outward No: 1245352140/2024
M/S. Nanded UG Coal Mine, WCL, Khanan Aera, Chhindwara, Consent No:AW-61222
Village: Chakat berri, Tehsil: Jamai,
Distt: Chhindwara (M.P.)- 480554

Subject: Grant of Renewal of Consent to Operate under section 25 of the Water (Prevention & Control of Pollution) Act,1974 & under section 21 of the Air (Prevention & Control of Pollution) Act,1981

Ref: Your Application Receipt No. 1397540 Dt. 27/09/2024 and last communication received on Dt.26/09/2024

With reference to your above application for Renewal of consent to operate has been considered under the aforesaid Acts and existing rules therein. The M. P. Pollution Control Board has agreed to grant consent up to **30/09/2025**, subject to the fulfillment of the terms & conditions, enclosed with this letter and-

SUBJECT TO THE FOLLOWING CONDITIONS :-

a. Location: Village: Chakat berri, Tehsil: Jamai,Distt: Chhindwara (M.P.)- 480554
Latitude : 22.2063 Longitude : 78.4603

b. Mining Lease Area: 543.500 Hct.

c. Product & Production Capacity:

Activity / Product	Qty / year
Mining of Coal	0.405 Million Ton per year.

Note:-

- For any change in above industry shall obtain fresh consent from the Board.
- As reported by the PP Mining in this UG mine has been discontinued since July 2013 as the coal from the lease area has been evacuated, renewal of consent is being granted so as to use the existing infrastructure of this mine for the proposed extension of UG mine in additional 112.54 Ha which is pending with MoEF & CC for clearances.
- PP shall ensure that mining done in sanctioned lease area as per valid mining plan duly approved by the competent Authority & in compliance of conditions laid in EC granted by MoEF & CC.
- Management shall ensure timely repair and maintenance of its damaged coverings of transfer points and proper maintenance of conveyor belt to avoid any leakages/spillage of the coal dust. Mine management shall ensure proper maintenance of STP and ETP so as to treat and properly utilize the treated effluent.
- As per provision of Fly Ash Utilization Notification Issued by MoEF & CC, GOI on dt 31.12.2021; The PP shall ensure compliances listed in the notification. The utilization of fly ash in the OB dumps/Mine voids shall be done under EPR as per provision of above rules.

The Validity of the consent is up to **30/09/2025** and has to be renewed before expiry of consent validity. Online application through XGN with annual license fees in this regard shall be submitted to this office 6 months before expiry of the consent/Authorization. Board reserves the right to amend/cancel / revoke the above condition in part or whole as and when required.

Enclosures:-

- * Conditions under Water Act
- * Conditions under Air Act
- * General conditions

CC to :-

- District Mining Officer, (Mining Section), Collector office, Chhindwara Dist. Chhindwara (M.P.) for information.
- M.P. State Mining Corporation, Arera Hills, Jail Road, Bhopal (M.P.) for necessary action please.
- Regional officer, Regional office, MPPCB, Chhindwara (M.P.)

By the order of Chairman, MPPCB

eSign
 Signing from eIDAS
 Server
 Digitally Sign with Aadhaar
(Organic Authentication on AADHAR from UIDAI Server)
 TPAV # U6L5218R63

Signature Not Verified
 Digitally Signed by : A. A
 Mishra, Member Secretary
 Date: 21/10/2024 08:24:42 PM

ACHYUT ANAND MISHRA
Member Secretary

CONDITIONS PERTAINING TO WATER (PREVENTION & CONTROL OF POLLUTION) ACT 1974 :-

1. The daily quantity of trade effluent of the unit shall not exceed Nil, and the daily quantity of sewage of the unit shall not exceed **480.0 KL/day**.

2. Trade Effluent Treatment:-

The applicant shall operate effluent treatment system and maintain the same properly to achieve following standards-

pH	Between	5.5 - 9.0	TDS	Not exceed	2100 mg/l.
Suspended Solids	Not exceed	100 mg/l.	Chlorides	Not exceed	1000 mg/l.
BOD ₅ Days 27 °C	Not exceed	30 mg/l.			
COD	Not exceed	250 mg/l.			
Oil and grease	Not exceed	10 mg/l.			

For other parameters general standards of discharge as notified under EP Act 1986 and standards notified by MPPCB from time to time shall be applicable.

3. Sewage Treatment :-

The applicant shall operate and maintain sewage treatment facility to achieve following standards-

pH	Between	6.5 - 9.0
Suspended Solids	Not exceed	100 mg/l.
BOD 3 Days 27 °C	Not exceed	30 mg/l.
COD	Not exceed	250 mg/l.
Oil and grease	Not exceed	10 mg/l.
Fecal coliform	Not exceed	1000 MPN/100 ml

4. The effluent shall be treated up to prescribed Standards and reuse in the process, for cooling and for green belt development/gardening within premises. Hence zero discharge condition shall be practiced. In no case treated effluent shall be discharged outside of industry/unit premises.

5. Water meter preferably electromagnetic/ultrasonic type with digital flow recording facilities shall be installed separately for category wise consumption of water for domestic purposes and data shall be submitted online through XGN monthly patrak/statements.

Sr	Water Code (Qty in KLD)	WC : 600.0	WWG : 480.0	Water Source
1	Domestic Purpose	600.0	480.0	Other

6. Any change in production capacity, process, raw material used etc. and for any enhancement of the above prior permission of the Board shall be obtained. All authorized discharges shall be consistent with terms and conditions of this consent. Facility expansions, production increases or process modifications which result new or increased discharges of pollutants must be reported by submission of a fresh consent application for prior permission of the Board.

7. All treatment/control facilities/systems installed or used by the applicant shall be regularly maintained in good working order and operate effectively/efficiently to achieve compliance of the terms and conditions of this consent

8. The specific effluent limitations and pollution control systems applicable to the discharge permitted herein are set forth as above conditions.

9. Compilation of Monitoring data-

i. Samples and measurements taken to meet the monitoring requirements specified above shall be representative of the volume and nature of monitored discharge.

ii. Following promulgation of guidelines establishing test procedures for the analysis of pollutants, all sampling and analytical methods used to meet the monitoring requirements specified above shall conform to such guidelines unless otherwise specified sampling and analytical methods shall conform to the latest edition of the Indian Standard specifications and where it is not specified the guidelines as per standard methods for the examination of Water and Waste latest edition of the American Public Health Association, New York U.S.A. shall be used.

iii. The applicant shall take samples and measurement to meet the monthly requirements specified above and report online through XGN the same to the Board.

10. Recording of Monitoring Activities & Results-

i. The applicant shall make and maintain online records of all information resulting from monitoring activities by this Consent.

ii. The applicant shall record for each measurement of samples taken pursuant to the requirements of this Consent as follows:

- (i) The date, exact place and time of sampling
- (ii) The dates on which analysis were performed
- (iii) Who performed the analysis?
- (iv) The analytical techniques or methods used and
- (v) The result of all required analysis

Consent No:AW-61222

iii. If the applicant monitors any Pollutant more frequently as is by this Consent he shall include the results of such monitoring in the calculation and reporting of values required in the discharge monitoring reports which may be prescribed by the Board. Such increased frequency shall be indicated on the Discharge Monitoring Report Form.

iv. The applicant shall retain for a minimum of 3 years all records of monitoring activities including all records of Calibration and maintenance of instrumentation and original strip chart regarding continuous monitoring instrumentation. The period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the applicant or when requested by Central or State Board or the court.

11. Reporting of Monitoring Results:-

Monitoring information required by this Consent shall be summarized and reported by submitting a Discharge Monitoring report on line to the Board.

12. Limitation of discharge of oil Hazardous Substance in harmful quantities:-

The applicant shall not discharge oil or other hazardous substances in quantities defined as harmful in relevant regulations into natural water course. Nothing in this Consent shall be deemed to preclude the institution of any legal action nor relieve the applicant from any responsibilities, liabilities, or penalties to which the applicant is or may be subject to clauses.

13. Limitation of visible floating solids and foam:-

During the period beginning date of issuance the applicant shall not discharge floating solids or visible foam.

14. Disposal of Collected Solid waste/sludge-

All hazardous waste/sludge shall be disposed of as per the Authorization issued under Hazardous & other waste (M&TM) Rules 2016. And/other Solids Sludges, dirt, silt or other pollutant separated from or resulting from treatment shall be disposed of in such a manner as to prevent any pollutant from such materials from entering any such water. Any live fish, Shell fish or other animal collected or trapped as a result of intake water screening or treatment may be returned to eaters body habitat.

15. Provision for Electric Power Failure-

The applicant shall assure to the consent issuing authority that the applicant has installed or provided for an alternative electric power source sufficient to operate all facilities utilized by the applicant to maintain compliance with the terms and conditions of the Consent.

16. Prohibition of By pass system of treatment facilities-

The diversion or by-pass of any discharge from facilities utilized by the applicant to maintain compliance with the terms and conditions of this Consent is prohibited except:

- i. where unavoidable to prevent loss of life or severe property damage, or
- ii. Where excessive storm drainage or run off would damage any facilities necessary for compliance with the terms and conditions of this Consent. The applicant shall immediately notify the consent issuing authorities in writing of each such diversion or by-pass in accordance with the procedure specified above for reporting non-compliance.

17. Mine management shall submit the information online through XGN in reference to compliance of consent conditions.

19. In case of any discharge found outside of unit premises the unit may be liable to pay environmental compensation as per NGT orders O.A. no 593/2017 dated 22.02.2021 and the industry shall be punishable or court case may be filed by the Board under provisions of the Water (Prevention & Control of Pollution) Act, 1974.

Additional Water condition:-

1. The mine management shall maintain zero discharge conditions as far as possible. The Mine management shall optimize the water abstraction from the surface water source, if any, by utilizing the mine discharge for spraying on haul roads, mine area and loading - unloading area after proper treatment. The treated mine discharge shall also be utilized for sanitary purposes by providing separate supply lines, dust suppression and for plantation in order to ensure zero discharge status as far as possible.
2. Rain water harvesting shall be undertaken to recharge ground water source and status of implementation shall be submitted to the Board. Hydro-geological study of the area shall be reviewed annually. In case any adverse effect on ground water quality and quantity is observed, mining shall be stopped and resumed only after applying mitigating steps to restore.
3. The mine water should be treated in siltation ponds. The quality of siltation pond water shall be regularly monitored and mitigation measure shall be taken.
4. Mine management shall comply with the conditions stipulated in the Environmental Clearance granted by MoEF&CC.

CONDITIONS PERTAINING TO AIR (PREVENTION & CONTROL OF POLLUTION) ACT 1981 :-

1. The applicant shall operate and maintain air pollution control system to achieve the level of pollutants to the following standards:-

Name of section	Control equipment to be installed	SPM/RSPM/SO _x /NO _x (mg/NM ³) (Annual Average)
Loading-unloading, Transportation, Haul road, CHP etc	Dust Collector, Dust Suppressor, Green Belt, Water Sprinkler, Wind Breaking Wall	430 / 215/80/80 (24 Hr. Average : 600/300/120/120)

2. The Ambient air quality norms are prescribed in MoEF gazette notification no. GSR/826(E), dated: 16/11/09. Some of the parameters are as follows:

- Particulate Matter (less than 10 micron) - 100 µg/m³ (PM10 µg/m³ 24 hrs. basis)
- Particulate Matter (less than 2.5 micron) - 60 µg/m³ (PM2.5 µg/m³ 24 hrs. basis)
- Sulphur Dioxide [SO₂] (24 hrs. Basis) - 80 µg/m³
- Nitrogen Oxides [NO_x] (24 hrs. Basis) - 80 µg/m³
- Carbon Monoxide [CO] (8 hrs. Basis) - 2000 µg/m³

3. The industry shall take adequate measures for control of noise level generated from industrial activities within the premises less than 75 dB(A) during day time and 70 dB(A) during night time.

4. The industry/unit shall make the necessary arrangements for control of the fugitive emission from any source of emission/section/activities.

5. All other fugitive emission sources such as leakages, seepages, spillages etc shall be ensured to be plugged or sealed or made airtight to avoid the public nuisance.

6. The industry/ unit shall ensure all necessary arrangements for control of odour nuisance from the industrial activities or process within premises

7. All the internal roads shall be made pucca to control the fugitive emissions of particulate matter generated due to transportation and internal movements. Good housekeeping practices shall be adopted to avoid leakages, seepages, spillages etc.

8. Industry shall take effective steps for extensive tree plantation preferably of the local tree species within or around the industry/unit premises for general improvement of environmental conditions.

9. In case of emission found exceeding prescribed standards, the unit may be liable to pay environmental compensation as per NGT orders O.A. no 593/2017 dated 22.02.2021 and the industry shall be punishable or court case may be filed by the Board under provisions of the Air (Prevention & Control of Pollution) Act, 1981.

Additional Air condition:-

- Mine management shall regularly operate the CAAQMS station to monitor ambient air quality in the Singrauli area and its vicinity and shall provide its suitable unhindered connectivity with Environment Surveillance Centre of the MPPCB and transmit the data within stipulated time.
- Mine management shall strictly comply with the directions of the Hon'ble NGT in the matters concerning issues pertaining to coal mines and shall report accordingly.
- Whenever the mine will be in operation coal crushing, conveyor system, haulage road, transfer points, coal loading and unloading in railway wagons / trucks should be provided with adequate number of high efficiency dust extraction / suppression / water sprinkling system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated. Dust control measures shall be adopted at coal transfer point of the machines as per the need.
- Major approach roads and haul roads shall be metal topped; drills shall be wet operated to reduce the fugitive emission.
- Sufficient number of water tanker for water sprinkling shall be provided for the control of fugitive emission from haul road.
- The coal transportation from mine to the Nandan Coal washery shall be done through dedicated conveyor arrangement only and the transportation by road shall not be carried out at all.

Consent No:AW-61222

GENERAL CONDITIONS:

1. MANAGEMENT & DISPOSAL OF FLY ASH:-

MoEF &CC, GOI has issued notification dated 31.12.2021 regarding procedures & mandate to increase utilization of fly ash generated by the thermal power plants through the Coal mines under extended producers responsibility. This notification No.SO 5481 (E) dated 31.12.2021 has been published suppressing the previous Fly Ash Utilization Notification dt 14.09.199 as amended.

Following paras no. 3 & 4 of part B at page no. 16 of the notification are reproduced for taking necessary action at your end –

(3) *It shall be obligatory on all mines located within 300 Kilometres radius of thermal power plant to undertake backfilling of ash in mine voids or mixing of ash with external overburden dumps under extended Producer Responsibility (EPR). All mine owners or operators (Government, Public and Private sector) within three Hundred kilometres (by road) from coal or lignite based thermal power plants, shall undertake measure to mix at least 25 percent of ash on weight to weight basis of the materials used for external dump of overburden, backfilling or stowing of mine (running or abandoned as the case may be) as per the guidelines of the Director General of Mines Safety (DGMS).*

Provided that such thermal power stations shall facilitate the availability of required quality of ash by delivering ash free of cost and bearing the cost of transportation or transportation arrangement decided on mutually agreed terms and mixing of ash with overburden in mine voids and dumps shall be applicable for the overburden generated from the date of publication of this notification and the utilisation of ash in the said activities shall be carried out in accordance with guidelines laid down by the Central Pollution Control Board, Director General of Mines Safety and Indian Bureau of Mines.

Explanation- For the purpose of this sub paragraph, it is also clarified that the provisions of ash free of cost and free transportation shall be applicable, if thermal power plants serve a notice on the mine owner for the same and the mandate of using 25 percent of ash for mixing with overburden dump and filling up of mine voids shall not be applicable unless a notice is served on the mine owner by thermal power plant

(4) (i) *All mine owners shall get mine closure plans (progressive and final) to accommodate ash in the mine voids and the concerned authority shall approve mine plans for disposal of ash in mine voids and mixing of ash with overburden dumps. The Ministry of Environment Forest and Climates Change (MOEFCC) has issued guidelines on 28th August, 2019 regarding exemption of requirement of Environment Clearance of thermal power plants and coal mines along with the guidelines to be followed for such disposal.*

(ii) *The Ministry in consultation with Central Pollution Control Board (CPCB), Director General of Mine Safety (DGMS) and Indian Bureau of Mines (IBM) may issue further guidelines time to time to facilitate ash disposal in mine voids and mixing with overburden dumps and it shall be the responsibility of mine owners to get the necessary amendments of modification in the permission issued by various regulatory authorities within one year from the date of identification of such mines.*

2. The non hazardous solid waste arresting in the mine premises sweeping, etc. be disposed off scientifically so as not to cause any nuisance/pollution. The applicant shall take necessary permission from civic authorities for disposal to dumping site. If required.

Non Hazardous Solid wastes:-

Type of waste	Quantity	Disposal
Scrap/ Plastic packing material wood, card board, gunny bags etc	Record should be maintained	Sale to authorized party/As Per CPCB, MoEF Guide lines / Others.

3. The applicant shall allow the staff of Madhya Pradesh Pollution Control Board and/or their authorized representative, upon the representation of credentials:

- To inspect raw material stock, manufacturing processes, reactors, premises etc to perform the functions of the Board.
- To enter upon the applicant's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this Consent.
- To have access at reasonable times to any records required to be kept under the terms and conditions of this Consent.
- To inspect at reasonable times any monitoring equipment or monitoring method required in this Consent: or,
- To sample at reasonable times any discharge or pollutants.

4. This consent is transferable in nature, in case of any change in ownership / management, the new owner / partner / directors / proprietor shall immediately apply for the consent with new requisite information.

5. The issuance of this Consent does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any invasion of personal rights, nor any infringement of Central, State or local laws or regulations.

Consent No:AW-61222

6. Mine management shall install separate electric metering arrangement for running of pollution control devices and this arrangement shall be made in such fashion that any non functioning of pollution control devices shall immediately stop electric supply to the production and shall remain tripped till such time unless the pollution control device/devices are made functional. The record of electricity consumption for running of pollution control equipment shall be maintained and submitted to the Board every month
7. This consent is granted in respect of Water pollution control Act 1974 or Air Pollution Control act, 1981 only and does not relate to any other Department/Agencies. License required from other Department/Agencies have to be obtained by the unit separately and have to comply separately as per there Act / Rules.
8. Balance consent fee, if any shall be recoverable by the Board even at a later date.
9. The applicant shall submit such information, forms and fees as required by the board not later than 180 day prior to the date of expiration of this consent.
10. The Mine management shall submit environmental statement for the previous year ending 31st March on or before 30th September every year to the Board.
11. Mine management shall obtain membership of Emergency Response Center of the Board if needed.
12. Knowingly making any false statement for obtaining consent or compliance of consent conditions shall result in the imposition of criminal penalties as provided under the section 42(g) of the Water Act or section 38 (g) of the Air Act.
13. After notice and opportunity for the hearing, this consent may be modified, suspended or revoked by the Board in whole or in part during its term for cause including, but not limited to, the following :
 - (a) Violation of any terms and conditions of this Consent.
 - (b) Obtaining this Consent by misrepresentation of failure to disclose fully all relevant facts.
 - (c) A change in any condition that requires temporary or permanent reduction or elimination of the authorized discharge.
14. On violation of any of the above-mentioned conditions the consent granted will automatically be taken as canceled and necessary action will be initiated against the Mine management.
15. The industry/unit shall also monitor the treated wastewater flow and report the same online through monthly patrak/statements.
16. The applicant shall take samples and measurement to meet the monthly requirements specified above and report online through XGN the same to the Board.
17. Ambient air quality at the boundary of the industry/unit premises shall be monitored and reported to the Board regularly on quarterly basis
18. The record of electricity consumption for running of pollution control equipment shall be maintained and submitted to the Board every month.

Renewal of Consent as required under the Water (Prevention & Control of Pollution) Act, 1974 & The Air (Prevention & Control of Pollution) Act, 1981 is granted to your mine subject to fulfillment of all the conditions mentioned above. For further renewal purpose you shall have to make an application to this Board through XGN at least Six months before the date of expiry of this consent. The applicant without valid consent (for operation) of the Board shall not bring in to use any outlet for the discharge of effluent and gaseous emission.

For and on behalf of
M.P. Pollution Control Board

By the order of Chairman, MPPCB



ACHYUT ANAND MISHRA
Member Secretary



Digitally Sign with Aadhaar
(Organic Authentication on AADHAR from UIDAI Server)
TPAV # U6L5218R63

Consent No:AW-61222

Production Details for Last Five Years

NANDAN UG MINE

Sr. No.	Year	Production (Million Tonnes per Annum)
1.	2019-20	Nil; Mine discontinued since 01.07.2013
2.	2020-21	Nil; Mine discontinued since 01.07.2013
3.	2021-22	Nil; Mine discontinued since 01.07.2013
4.	2022-23	Nil; Mine discontinued since 01.07.2013
5.	2023-24	Nil; Mine discontinued since 01.07.2013
6.	2024-25	Nil; Mine discontinued since 01.07.2013
7.	2025-26	Nil; Mine discontinued since 01.07.2013



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ENVIRONMENTAL MONITORING REPORT

NANDAN UG

KANHAN AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423067



APRIL 2025

Environment Laboratory
NABL Accredited vide Cert. No. TC-7102
CMPDI
REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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TEST REPORT NO.	RIN/TR/APRIL-25/73	DATE OF ISSUE	25-05-2025
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 Part-4, PM-10: IS-5182 Part 23, PM2.5: IS 5182 Part 24, NO2: IS 5182 Part-06, SO2:IS 5182 Part-2		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-04-25 TO 15-05-25

SAM OFFICE- NANDAN I UG KNUA1							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m ³)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
06-04-2025	07-04-2025	320	211	53	20	17	Clear sky / Calm
21-04-2025	22-04-2025	330	221	56	25	19	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	


PIT OFFICE NANADAN II UG KNUA2							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m ³)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
06-04-2025	07-04-2025	301	203	56	17	14	Clear sky / Calm
21-04-2025	22-04-2025	312	213	58	19	16	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

HEALTH CENTER-NANADAN UG KNUA3							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m ³)				ENVIRONMENT CONDITIONS (Sky/Wind)	
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
06-04-2025	07-04-2025	90	34	10	BDL	Clear sky / Calm	
21-04-2025	22-04-2025	92	36	11	BDL	Clear sky / Calm	
NAAQS, 2009		100	60	80	80		

NANDAN WATER FILTER PLANT KNUA4							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m ³)				ENVIRONMENT CONDITIONS (Sky/Wind)	
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
06-04-2025	07-04-2025	93	33	14	BDL	Clear sky / Calm	
21-04-2025	22-04-2025	89	30	12	BDL	Clear sky / Calm	
NAAQS, 2009		100	60	80	80		

J. Chay

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7107
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SAMPLE DESCRIPTION	Water sample		
Test Required	pH: IS 3025 -Part 11,TSS: IS 3025-Part 17,COD: APHA (24th Edition) 5220 C ,O &G: IS 3025-Part 39 & BOD: IS 3025 (Part 44)		
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES :	16-04-25 TO 15-05-25

MINE WATER DISCHARGE: KNUW1				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
06-04-2025	7.05	29	44	BDL
23-04-2025	7.1	27	40	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

J. Shy

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

FAN HOUSE UG II: KNUN1			
MONTH	DATE OF SAMPLE	NOISE LEVEL IN dB(A)	
	COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
APRIL'25	08-04-2025	70.1	68.2
APRIL'25	28-04-2025	68.3	65.4
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY: KNUN2			
MONTH	DATE OF SAMPLE	NOISE LEVEL IN dB(A)	
	COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
APRIL'25	08-04-2025	42.7	40.3
APRIL'25	28-04-2025	43.5	41.1
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45


 Yogesh Pidurkar
 Reviewed by


 Amol Kamble
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ENVIRONMENTAL MONITORING REPORT

NANDAN UG

KANHAN AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423067



JUNE 2025




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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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TEST REPORT NO.	RIN/TR/JUNE-25/73	DATE OF ISSUE	7/25/2025
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-06-25 TO 15-07-25

SAM OFFICE- NANDAN I UG KNUA1							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
FROM	TO	5	5	2	6	10	
6/6/2025	6/7/2025	278	166	52	15	13	Clear sky / Calm
6/20/2025	6/21/2025	266	159	48	13	12	Cloudy sky / Light breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

PIT OFFICE NANADAN II UG KNUA2							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
FROM	TO	5	5	2	6	10	
6/6/2025	6/7/2025	257	150	43	12	11	Clear sky / Calm
6/20/2025	6/21/2025	246	144	41	11	10	Cloudy sky / Light breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

HEALTH CENTER-NANADAN UG KNUA3							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				ENVIRONMENT CONDITIONS (Sky/Wind)	
		PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
FROM	TO	5	2	6	10		
6/6/2025	6/7/2025	79	30	9	BDL	Clear sky / Calm	
6/20/2025	6/21/2025	76	27	7	BDL	Cloudy sky / Light breeze	
NAAQS, 2009		100	60	80	80		

NANDAN WATER FILTER PLANT KNUA4							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				ENVIRONMENT CONDITIONS (Sky/Wind)	
		PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
FROM	TO	5	2	6	10		
6/6/2025	6/7/2025	80	32	8	BDL	Clear sky / Calm	
6/20/2025	6/21/2025	77	25	6	BDL	Cloudy sky / Light breeze	
NAAQS, 2009		100	60	80	80		

J. Shan

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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SAMPLE DESCRIPTION	Water sample		
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)		
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES :	16-06-25 TO 15-07-25

MINE WATER DISCHARGE: KNUW1				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
6/5/2025	6.91	33	44	BDL
6/20/2025	6.88	27	40	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

J. Shrivastava

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

FAN HOUSE UG II: KNUN1			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		DETECTION LIMIT	20
JUNE'25	6/4/2025	70.8	69.1
JUNE'25	6/23/2025	66.1	65.1
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY: KNUN2			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		DETECTION LIMIT	20
JUNE'25	6/4/2025	43.2	40.6
JUNE'25	6/23/2025	43.7	42.3
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45


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ENVIRONMENTAL MONITORING REPORT

NANDAN UG

KANHAN AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423067




JULY 2025



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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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TEST REPORT NO.	RIN/TR/JULY-25/73	DATE OF ISSUE	25-08-2025
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-07-25 TO 15-08-25

SAM OFFICE- NANDAN I UG KNUA1							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
FROM	TO	5	5	2	6	10	
05-07-2025	06-07-2025	259	152	45	14	11	Rainy sky / Light breeze
20-07-2025	21-07-2025	270	163	51	16	13	Cloudy sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

PIT OFFICE NANADAN II UG KNUA2							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
FROM	TO	5	5	2	6	10	
05-07-2025	06-07-2025	261	165	49	15	12	Rainy sky / Light breeze
20-07-2025	21-07-2025	283	172	54	19	14	Cloudy sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

HEALTH CENTER-NANADAN UG KNUA3							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				ENVIRONMENT CONDITIONS (Sky/Wind)	
		PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
FROM	TO	5	2	6	10		
03-07-2025	04-07-2025	75	24	6	BDL	Rainy sky / Light breeze	
04-07-2025	05-07-2025	79	26	8	BDL	Rainy sky / Light breeze	
09-07-2025	10-07-2025	81	29	9	BDL	Rainy sky / Light breeze	
10-07-2025	11-07-2025	76	27	6	BDL	Rainy sky / Light breeze	
18-07-2025	19-07-2025	83	31	8	BDL	Cloudy sky / Calm	
19-07-2025	20-07-2025	85	33	11	BDL	Cloudy sky / Calm	
24-07-2025	25-07-2025	80	30	9	BDL	Cloudy sky / Calm	
25-07-2025	26-07-2025	82	32	10	BDL	Cloudy sky / Calm	
29-07-2025	30-07-2025	81	28	8	BDL	Cloudy sky / Calm	
30-07-2025	31-07-2025	84	35	13	BDL	Cloudy sky / Calm	
NAAQS, 2009		100	60	80	80		

NANDAN WATER FILTER PLANT KNUA4							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				ENVIRONMENT CONDITIONS (Sky/Wind)	
		PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
FROM	TO	5	2	6	10		
03-07-2025	04-07-2025	76	27	6	BDL	Rainy sky / Light breeze	
04-07-2025	05-07-2025	78	29	7	BDL	Rainy sky / Light breeze	
09-07-2025	10-07-2025	80	31	10	BDL	Rainy sky / Light breeze	
10-07-2025	11-07-2025	77	27	7	BDL	Rainy sky / Light breeze	
18-07-2025	19-07-2025	81	30	9	BDL	Cloudy sky / Calm	
19-07-2025	20-07-2025	83	32	9	BDL	Cloudy sky / Calm	
24-07-2025	25-07-2025	85	34	12	BDL	Cloudy sky / Calm	
25-07-2025	26-07-2025	84	34	12	BDL	Cloudy sky / Calm	
29-07-2025	30-07-2025	82	31	9	BDL	Cloudy sky / Calm	
30-07-2025	31-07-2025	86	36	13	BDL	Cloudy sky / Calm	
NAAQS, 2009		100	60	80	80		

J. Singh

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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SAMPLE DESCRIPTION	Water sample		
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)		
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES :	16-07-25 TO 15-08-25

MINE WATER DISCHARGE: KNUW1				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
05-07-2025	7.17	25	36	BDL
19-07-2025	8.11	23	32	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

FAN HOUSE UG II: KNUN1			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JULY'25	12-07-2025	66.2	65.4
JULY'25	26-07-2025	65.3	64.5
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY: KNUN2			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JULY'25	12-07-2025	43.9	42.2
JULY'25	26-07-2025	44.2	42.5
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45


Yogesh Pidurkar
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ENVIRONMENTAL MONITORING REPORT

NANDAN UG

KANHAN AREA

WESTERN COALFIELDS LTD.


JOB NO. 4094423067



APRIL 2025

Environment Laboratory
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REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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TEST REPORT NO.	RIN/TR/APRIL-25/73	DATE OF ISSUE	25-05-2025
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 Part-4, PM-10: IS-5182 Part 23, PM2.5: IS 5182 Part 24, NO2: IS 5182 Part-06, SO2:IS 5182 Part-2		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-04-25 TO 15-05-25

SAM OFFICE- NANDAN I UG KNUA1							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
FROM	TO	5	5	2	6	10	
06-04-2025	07-04-2025	320	211	53	20	17	Clear sky / Calm
21-04-2025	22-04-2025	330	221	56	25	19	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	


PIT OFFICE NANADAN II UG KNUA2							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
FROM	TO	5	5	2	6	10	
06-04-2025	07-04-2025	301	203	56	17	14	Clear sky / Calm
21-04-2025	22-04-2025	312	213	58	19	16	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

HEALTH CENTER-NANADAN UG KNUA3							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				ENVIRONMENT CONDITIONS (Sky/Wind)	
		PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
FROM	TO	5	2	6	10		
06-04-2025	07-04-2025	90	34	10	BDL	Clear sky / Calm	
21-04-2025	22-04-2025	92	36	11	BDL	Clear sky / Calm	
NAAQS, 2009		100	60	80	80		

NANDAN WATER FILTER PLANT KNUA4							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				ENVIRONMENT CONDITIONS (Sky/Wind)	
		PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
FROM	TO	5	2	6	10		
06-04-2025	07-04-2025	93	33	14	BDL	Clear sky / Calm	
21-04-2025	22-04-2025	89	30	12	BDL	Clear sky / Calm	
NAAQS, 2009		100	60	80	80		

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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SAMPLE DESCRIPTION	Water sample		
Test Required	pH: IS 3025 -Part 11,TSS: IS 3025-Part 17,COD: APHA (24th Edition) 5220 C ,O &G: IS 3025-Part 39 & BOD: IS 3025 (Part 44)		
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES :	16-04-25 TO 15-05-25

MINE WATER DISCHARGE: KNUW1				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
06-04-2025	7.05	29	44	BDL
23-04-2025	7.1	27	40	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

FAN HOUSE UG II: KNUN1			
MONTH	DATE OF SAMPLE	NOISE LEVEL IN dB(A)	
	COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
APRIL'25	08-04-2025	70.1	68.2
APRIL'25	28-04-2025	68.3	65.4
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY: KNUN2			
MONTH	DATE OF SAMPLE	NOISE LEVEL IN dB(A)	
	COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
APRIL'25	08-04-2025	42.7	40.3
APRIL'25	28-04-2025	43.5	41.1
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45


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ENVIRONMENTAL MONITORING REPORT

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OCTOBER 2025

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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TEST REPORT NO.	RIN/TR/OCT-25/73	DATE OF ISSUE	25.11.2025
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-10-25 TO 15-11-25

SAM OFFICE- NANDAN I UG KNUA1							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
05.10.2025	06.10.2025	324	196	58	23	16	Cloudy sky / Light Breeze
24.10.2025	25.10.2025	312	187	51	18	14	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH OCTember 2000		600	300	-	120	120	

PIT OFFICE NANADAN II UG KNUA2							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
05.10.2025	06.10.2025	296	175	47	17	14	Cloudy sky / Light Breeze
24.10.2025	25.10.2025	287	160	43	15	13	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH OCTember 2000		600	300	-	120	120	

HEALTH CENTER-NANADAN UG KNUA3							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
08.10.2025	09.10.2025	78	27	8	BDL	Cloudy sky / Light breeze	
09.10.2025	10.10.2025	81	30	11	10	Cloudy sky / Light breeze	
13.10.2025	14.10.2025	76	25	7	BDL	Cloudy sky / Light breeze	
17.10.2025	18.10.2025	65	22	6	BDL	Cloudy sky / Calm	
22.10.2025	23.10.2025	69	23	7	BDL	Cloudy sky / Calm	
23.10.2025	24.10.2025	80	29	10	BDL	Cloudy sky / Calm	
28.10.2025	29.10.2025	77	26	8	BDL	Cloudy sky / Calm	
29.10.2025	30.10.2025	85	34	13	11	Cloudy sky / Calm	
NAAQS, 2009		100	60	80	80		

NANDAN WATER FILTER PLANT KNUA4							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
08.10.2025	09.10.2025	68	23	7	BDL	Cloudy sky / Light breeze	
09.10.2025	10.10.2025	70	24	8	BDL	Cloudy sky / Light breeze	
13.10.2025	14.10.2025	75	25	9	BDL	Cloudy sky / Light breeze	
17.10.2025	18.10.2025	77	28	9	BDL	Cloudy sky / Calm	
22.10.2025	23.10.2025	80	32	11	10	Cloudy sky / Calm	
23.10.2025	24.10.2025	82	34	12	11	Cloudy sky / Calm	
28.10.2025	29.10.2025	85	36	13	12	Cloudy sky / Calm	
29.10.2025	30.10.2025	81	31	10	BDL	Cloudy sky / Calm	
NAAQS, 2009		100	60	80	80		


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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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SAMPLE DESCRIPTION	Water sample	
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)	
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES : 16-10-25 TO 15-11-25

MINE WATER DISCHARGE: KNUW1				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
08.10.2025	7.81	29	44	BDL
18.10.2025	7.72	31	40	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10



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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

FAN HOUSE UG II: KNUN1			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		20	20
OCT'25	11.10.2025	67.4	64.6
OCT'25	29.10.2025	52.2	50.3
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY: KNUN2			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		20	20
OCT'25	11.10.2025	44.5	43.7
OCT'25	29.10.2025	43.4	41.6
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45


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ENVIRONMENTAL MONITORING REPORT

NANDAN UG

KANHAN AREA

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JOB NO. 4094423067



NOVEMBER 2025

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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TEST REPORT NO.	RIN/TR/NOV-25/73	DATE OF ISSUE	24-12-2025
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : L SOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-11-25 TO 15-12-25

SAM OFFICE- NANDAN I UG KNUA1							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
		5	5	2	6	10	
13-11-2025	14-11-2025	275	173	48	17	13	Clear sky / Calm
21-11-2025	22-11-2025	267	158	44	15	12	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH NOVember 2000		600	300	-	120	120	

PIT OFFICE NANADAN II UG KNUA2							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
		5	5	2	6	10	
13-11-2025	14-11-2025	280	183	51	18	14	Clear sky / Calm
21-11-2025	22-11-2025	293	196	57	20	15	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH NOVember 2000		600	300	-	120	120	

HEALTH CENTER-NANADAN UG KNUA3							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
		5	2	6	10		
06-11-2025	07-11-2025	66	25	6	BDL	Clear sky / Calm	
07-11-2025	08-11-2025	71	28	8	BDL	Clear sky / Calm	
12-11-2025	13-11-2025	69	27	7	BDL	Clear sky / Calm	
13-11-2025	14-11-2025	73	29	9	BDL	Clear sky / Calm	
20-11-2025	21-11-2025	80	30	10	BDL	Cloudy sky / Calm	
21-11-2025	22-11-2025	83	34	12	BDL	Cloudy sky / Calm	
26-11-2025	27-11-2025	68	27	8	BDL	Cloudy sky / Calm	
27-11-2025	28-11-2025	74	28	9	BDL	Cloudy sky / Calm	
NAAQS, 2009		100	60	80	80		

NANDAN WATER FILTER PLANT KNUA4							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
		5	2	6	10		
06-11-2025	07-11-2025	76	28	7	BDL	Clear sky / Calm	
07-11-2025	08-11-2025	79	31	8	BDL	Clear sky / Calm	
12-11-2025	13-11-2025	82	32	9	BDL	Clear sky / Calm	
13-11-2025	14-11-2025	85	34	12	BDL	Clear sky / Calm	
20-11-2025	21-11-2025	67	26	6	BDL	Cloudy sky / Calm	
21-11-2025	22-11-2025	75	25	8	BDL	Cloudy sky / Calm	
26-11-2025	27-11-2025	77	27	9	BDL	Cloudy sky / Calm	
27-11-2025	28-11-2025	84	35	11	BDL	Cloudy sky / Calm	
NAAQS, 2009		100	60	80	80		



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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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SAMPLE DESCRIPTION	Water sample		
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)		
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES :	16-11-25 TO 15-12-25

MINE WATER DISCHARGE: KNUW1				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
07-11-2025	8.04	27	36	BDL
21-11-2025	7.65	33	44	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10



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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

FAN HOUSE UG II: KNUN1			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		DETECTION LIMIT	20
			20
NOV'25	11-11-2025	52.2	49.3
NOV'25	26-11-2025	61.3	58.4
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY: KNUN2			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		DETECTION LIMIT	20
			20
NOV'25	11-11-2025	43.6	40.8
NOV'25	26-11-2025	42.4	39.6
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45


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DECEMBER 2025

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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TEST REPORT NO.	RIN/TR/DEC-25/73	DATE OF ISSUE	25-01-2026
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : L SOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-12-25 TO 15-01-26

SAM OFFICE- NANDAN I UG KNUA1							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
		5	5	2	6	10	
07-12-2025	08-12-2025	250	152	40	13	11	Clear sky / Calm
21-12-2025	22-12-2025	266	164	42	19	15	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DEcember 2000		600	300	-	120	120	

PIT OFFICE NANADAN II UG KNUA2							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
		5	5	2	6	10	
07-12-2025	08-12-2025	280	177	45	22	14	Clear sky / Calm
21-12-2025	22-12-2025	259	153	43	15	12	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DEcember 2000		600	300	-	120	120	

HEALTH CENTER-NANADAN UG KNUA3							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
		5	2	6	10		
04-12-2025	05-12-2025	85	37	22	14		Clear sky / Calm
05-12-2025	06-12-2025	80	32	20	12		Clear sky / Calm
11-12-2025	12-12-2025	75	29	16	BDL		Clear sky / Calm
12-12-2025	13-12-2025	74	28	15	BDL		Clear sky / Calm
19-12-2025	20-12-2025	79	31	18	BDL		Clear sky / Calm
20-12-2025	21-12-2025	82	34	19	11		Clear sky / Calm
25-12-2025	26-12-2025	80	32	18	10		Clear sky / Calm
26-12-2025	27-12-2025	77	30	14	BDL		Clear sky / Calm
NAAQS, 2009		100	60	80	80		

NANDAN WATER FILTER PLANT KNUA4							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
		5	2	6	10		
04-12-2025	05-12-2025	81	30	16	12		Clear sky / Calm
05-12-2025	06-12-2025	83	34	17	12		Clear sky / Calm
11-12-2025	12-12-2025	79	29	15	BDL		Clear sky / Calm
12-12-2025	13-12-2025	76	27	14	BDL		Clear sky / Calm
19-12-2025	20-12-2025	72	25	13	BDL		Clear sky / Calm
20-12-2025	21-12-2025	74	26	14	BDL		Clear sky / Calm
25-12-2025	26-12-2025	81	31	15	10		Clear sky / Calm
26-12-2025	27-12-2025	82	33	16	11		Clear sky / Calm
NAAQS, 2009		100	60	80	80		



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SAMPLE DESCRIPTION	Water sample		
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)		
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES :	16-12-25 TO 15-01-26

MINE WATER DISCHARGE: KNUW1				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
04-12-2025	7.56	29	40	BDL
19-12-2025	7.6	35	56	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10



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NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

FAN HOUSE UG II: KNUN1			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		DETECTION LIMIT	20
DEC'25	12-12-2025	70.1	69.2
DEC'25	29-12-2025	60.2	58.4
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY: KNUN2			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		DETECTION LIMIT	20
DEC'25	12-12-2025	43.2	40.4
DEC'25	29-12-2025	43.3	41.6
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45


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ENVIRONMENTAL MONITORING REPORT

NANDAN UG

KANHAN AREA

WESTERN COALFIELDS LTD.


JOB NO. 4094423067



JANUARY 2026

Environment Laboratory
NABL Accredited vide Cert. No. TC-7102
CMPDI
REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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TEST REPORT NO.	RIN/TR/JAN-26/73	DATE OF ISSUE	25-02-2026
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-01-26 TO 15-02-26

SAM OFFICE- NANDAN I UG KNUA1							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in µg/m ³)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
FROM	TO	5	5	2	6	10	
13-01-2026	14-01-2026	301	198	53	24	18	Cloudy sky / Calm
24-01-2026	25-01-2026	284	175	47	20	16	Cloudy sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DEcember 2000		600	300	-	120	120	

PIT OFFICE NANADAN II UG KNUA2							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in µg/m ³)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
FROM	TO	5	5	2	6	10	
13-01-2026	14-01-2026	293	180	46	21	17	Cloudy sky / Calm
24-01-2026	25-01-2026	277	169	44	18	15	Cloudy sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DEcember 2000		600	300	-	120	120	

HEALTH CENTER-NANADAN UG KNUA3							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in µg/m ³)				ENVIRONMENT CONDITIONS (Sky/Wind)	
		PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
FROM	TO	5	2	6	10		
05-01-2026	06-01-2026	75	24	10	BDL	Cloudy sky / Calm	
06-01-2026	07-01-2026	78	27	12	BDL	Cloudy sky / Calm	
11-01-2026	12-01-2026	85	35	20	BDL	Cloudy sky / Calm	
12-01-2026	13-01-2026	81	30	19	10	Cloudy sky / Calm	
18-01-2026	19-01-2026	79	28	13	BDL	Cloudy sky / Calm	
19-01-2026	20-01-2026	83	31	17	11	Cloudy sky / Calm	
23-01-2026	24-01-2026	82	29	16	BDL	Cloudy sky / Calm	
24-01-2026	25-01-2026	76	26	12	BDL	Cloudy sky / Calm	
29-01-2026	30-01-2026	77	27	11	BDL	Cloudy sky / Calm	
30-01-2026	31-01-2026	84	33	18	12	Cloudy sky / Calm	
NAAQS, 2009		100	60	80	80		

NANDAN WATER FILTER PLANT KNUA4							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in µg/m ³)				ENVIRONMENT CONDITIONS (Sky/Wind)	
		PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
FROM	TO	5	2	6	10		
05-01-2026	06-01-2026	76	30	14	BDL	Cloudy sky / Calm	
06-01-2026	07-01-2026	83	34	16	BDL	Cloudy sky / Calm	
11-01-2026	12-01-2026	84	29	20	12	Cloudy sky / Calm	
12-01-2026	13-01-2026	78	29	15	BDL	Cloudy sky / Calm	
18-01-2026	19-01-2026	74	29	13	BDL	Cloudy sky / Calm	
19-01-2026	20-01-2026	82	27	18	11	Cloudy sky / Calm	
23-01-2026	24-01-2026	80	25	17	BDL	Cloudy sky / Calm	
24-01-2026	25-01-2026	86	26	22	12	Cloudy sky / Calm	
29-01-2026	30-01-2026	81	31	20	10	Cloudy sky / Calm	
30-01-2026	31-01-2026	77	33	15	BDL	Cloudy sky / Calm	
NAAQS, 2009		100	60	80	80		

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SAMPLE DESCRIPTION	Water sample		
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)		
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES :	16-01-26 TO 15-02-26

MINE WATER DISCHARGE: KNUW1				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
06-01-2026	7.78	22	32	BDL
21-01-2026	7.03	30	44	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10



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NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

FAN HOUSE UG II: KNUN1			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		DETECTION LIMIT	20
JAN'26	10-01-2026	58.2	56.4
JAN'26	29-01-2026	59.2	57.4
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY: KNUN2			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		DETECTION LIMIT	20
JAN'26	10-01-2026	42.3	40.4
JAN'26	29-01-2026	42.5	40.6
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45


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ENVIRONMENTAL MONITORING REPORT

NANDAN UG

KANHAN AREA

WESTERN COALFIELDS LTD.


JOB NO. 4094423067



FEBRUARY 2026

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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TEST REPORT NO.	RIN/TR/FEB-26/73	DATE OF ISSUE	25-03-2026
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-02-26 TO 15-03-26

SAM OFFICE- NANDAN I UG KNUA1							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
13-02-2026	14-02-2026	290	185	52	22	16	Clear sky / Calm
27-02-2026	28-02-2026	277	168	44	18	14	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DEcember 2000		600	300	-	120	120	

PIT OFFICE NANADAN II UG KNUA2							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
13-02-2026	14-02-2026	287	175	50	20	15	Clear sky / Calm
27-02-2026	28-02-2026	266	158	42	17	13	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DEcember 2000		600	300	-	120	120	

HEALTH CENTER-NANADAN UG KNUA3							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
05-02-2026	06-02-2026	79	29	17	BDL	Cloudy sky / Calm	
06-02-2026	07-02-2026	80	30	20	BDL	Cloudy sky / Calm	
11-02-2026	12-02-2026	82	32	21	BDL	Cloudy sky / Calm	
12-02-2026	13-02-2026	76	28	16	BDL	Cloudy sky / Calm	
19-02-2026	20-02-2026	81	31	22	BDL	Cloudy sky / Calm	
20-02-2026	21-02-2026	77	27	15	BDL	Cloudy sky / Calm	
24-02-2026	25-02-2026	75	25	15	BDL	Cloudy sky / Calm	
25-02-2026	26-02-2026	74	24	14	BDL	Cloudy sky / Calm	
NAAQS, 2009		100	60	80	80		

NANDAN WATER FILTER PLANT KNUA4							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
05-02-2026	06-02-2026	83	32	22	BDL	Cloudy sky / Calm	
06-02-2026	07-02-2026	80	29	19	BDL	Cloudy sky / Calm	
11-02-2026	12-02-2026	76	26	15	BDL	Cloudy sky / Calm	
12-02-2026	13-02-2026	81	30	19	BDL	Cloudy sky / Calm	
19-02-2026	20-02-2026	75	26	16	BDL	Cloudy sky / Calm	
20-02-2026	21-02-2026	78	28	18	BDL	Cloudy sky / Calm	
24-02-2026	25-02-2026	76	27	16	BDL	Cloudy sky / Calm	
25-02-2026	26-02-2026	73	23	15	BDL	Cloudy sky / Calm	
NAAQS, 2009		100	60	80	80		



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SAMPLE DESCRIPTION	Water sample		
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)		
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES :	16-02-26 TO 15-03-26

MINE WATER DISCHARGE: KNUW1				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
05-02-2026	8.02	28	52	BDL
19-02-2026	7.9	32	48	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10



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NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

FAN HOUSE UG II: KNUN1			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		20	20
	DETECTION LIMIT	20	20
FEB'26	13-02-2026	57.2	55.4
FEB'26	26-02-2026	58.2	55.6
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY: KNUN2			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		20	20
	DETECTION LIMIT	20	20
FEB'26	13-02-2026	43.2	41.5
FEB'26	26-02-2026	42.2	39.4
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45


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ENVIRONMENTAL MONITORING REPORT

NANDAN UG

KANHAN AREA

WESTERN COALFIELDS LTD.


JOB NO. 4094423067



MARCH 2026

Environment Laboratory
NABL Accredited vide Cert. No. TC-7102
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JARIPATKA, NAGPUR, PIN – 440 014

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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TEST REPORT NO.	RIN/TR/MAR-26/73	DATE OF ISSUE	25-04-2026
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-03-26 TO 15-04-26

SAM OFFICE- NANDAN I UG KNUA1							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
FROM	TO	5	5	2	6	10	
13-03-2026	14-03-2026	289	189	40	16	14	Clear sky / Calm
26-03-2026	27-03-2026	302	201	50	20	17	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECEMBER 2000		600	300	-	120	120	

PIT OFFICE NANADAN II UG KNUA2							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
FROM	TO	5	5	2	6	10	
13-03-2026	14-03-2026	295	196	44	18	16	Clear sky / Calm
26-03-2026	27-03-2026	311	215	52	22	18	Clear sky / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECEMBER 2000		600	300	-	120	120	

HEALTH CENTER-NANADAN UG KNUA3							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				ENVIRONMENT CONDITIONS (Sky/Wind)	
		PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
FROM	TO	5	2	6	10		
04-03-2026	05-03-2026	72	22	14	BDL	Clear sky / Calm	
05-03-2026	06-03-2026	74	25	15	BDL	Clear sky / Calm	
11-03-2026	12-03-2026	77	27	17	BDL	Clear sky / Calm	
12-03-2026	13-03-2026	80	31	16	BDL	Clear sky / Calm	
18-03-2026	19-03-2026	82	33	15	BDL	Clear sky / Calm	
19-03-2026	20-03-2026	79	29	14	BDL	Clear sky / Calm	
28-03-2026	29-03-2026	84	34	18	12	Clear sky / Calm	
29-03-2026	30-03-2026	86	35	18	13	Clear sky / Calm	
NAAQS, 2009		100	60	80	80		

NANDAN WATER FILTER PLANT KNUA4							
DATE(dd:mm:yy)) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				ENVIRONMENT CONDITIONS (Sky/Wind)	
		PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
FROM	TO	5	2	6	10		
04-03-2026	05-03-2026	75	26	15	BDL	Clear sky / Calm	
05-03-2026	06-03-2026	77	29	16	BDL	Clear sky / Calm	
11-03-2026	12-03-2026	81	30	17	BDL	Clear sky / Calm	
12-03-2026	13-03-2026	83	32	16	BDL	Clear sky / Calm	
18-03-2026	19-03-2026	85	35	17	BDL	Clear sky / Calm	
19-03-2026	20-03-2026	86	37	18	11	Clear sky / Calm	
28-03-2026	29-03-2026	87	36	17	12	Clear sky / Calm	
29-03-2026	30-03-2026	84	33	16	13	Clear sky / Calm	
NAAQS, 2009		100	60	80	80		


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SAMPLE DESCRIPTION	Water sample		
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)		
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES :	16-03-26 TO 15-04-26

MINE WATER DISCHARGE: KNUW1				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
04-03-2026	7.65	26	40	BDL
18-03-2026	7.9	30	44	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10



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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TU-7102
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NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

FAN HOUSE UG II: KNUN1			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		DETECTION LIMIT	20
MAR'26	11-03-2026	70.2	68.7
MAR'26	27-03-2026	69.5	68.1
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY: KNUN2			
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
		DETECTION LIMIT	20
MAR'26	11-03-2026	42.9	39.7
MAR'26	27-03-2026	43.3	41.5
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45


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REPORT ON
MONITORING OF GROUND WATER LEVEL
OF
NANDAN II UG MINE,
KANHAN AREA
WESTERN COALFIELDS LTD.



PERIOD- MAY 2025 (PRE MONSOON), AUG 2025 (MONSOON), NOV 2025 (POST-MONSOON) & JAN 2026 (WINTER)



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2025-26

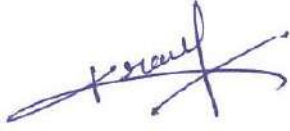
Certificate

Groundwater level monitoring has been conducted with due diligence, and a comprehensive report on the monitoring of groundwater levels in all observation wells has been prepared as per the scope of work outlined in work order no. वेकोलि/मुख्यालय/पर्यावरण/14-L/1122-1148, dated 19.04.2025 for the Jan 2026 (Winter) Period.

The report includes the monitoring of groundwater levels and water quality analysis of observation wells pertaining to NANDAN II UG MINE, of the Kanhan area of Chhindwara district, M.P.

The groundwater level monitoring was meticulously carried out by Anacon Laboratories Pvt. Ltd., and the analysis of the samples was performed by Anacon Laboratories Pvt. Ltd., a NABL Accredited Laboratory. (NABL Certificate no. TC-12998)

Anacon Laboratories Pvt. Ltd. gratefully acknowledges the full cooperation rendered by the concerned WCL officials, which facilitated the timely completion of the project.



Krupali Raut
(Geologist)



Gyanchand Bohra
NABET Accredited EIA Expert
for Hydrogeology & Geology

Nagpur
Jan-2026



(Dr. D. G. Garway)
Head of Organization
Anacon Laboratories Pvt. Ltd., Nagpur

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Gaurav

INTRODUCTION

Environment Department of Western Coalfield Limited (WCL), Nagpur has award the assignment engaged M/s Anacon Laboratories Pvt. Ltd, for conducting Ground water Monitoring (i.e. Borewell/Piezometer water level) for the year 2025-26 vide work order no. वेकोलि/मुख्यालय/पर्यावरण/14-L/1122-1148, dated 19.04.2025 for the Jan 2026 (Winter) Period.

NANDAN II UG MINE, is located in Chhindwara district of Madhya Pradesh. All Mines are administered by Kanhan Area of Western Coalfields Limited. Ground water Level monitoring for all the mines have been done for the year 2025-26 i.e. **PERIOD- MAY 2025 (PRE MONSOON), AUG 2025 (MONSOON), NOV 2025(POST MONSOON) & JAN 2026 (WINTER).**

GENERAL HYDROGEOLOGICAL CONDITION

The major part of the district is occupied by Deccan Trap, consisting of different lava flows whose thickness ranges between 7 to 21 m. The recent alluvium deposits are found at places along the Pench and the Kanhan rivers with thickness varying from 5.00 to 20.00 m. Alluvium comprises clayey material with intercalated layers of sand and gravels. Archaeans are exposed in parts of Sausar, Bichhua, Chhindwara, Jamai and Mohkhed blocks whereas the Coal bearing lower Gondwanas in parts of Jamai, Parasia and Jamai blocks. The upper Gondwanas occupy parts of Harrai and Tamia blocks. Ground water occurs under phreatic and semi-confined to confined conditions. Alluvium, weathered granites/gneisses, lower Gondwana sandstones, weathered, fractured and jointed massive basalts and vesicular basalts form the major phreatic aquifers; and weathered, fractured granites are noticed as main water-bearing zones at deeper levels.



Gawray

**NANDAN II UG MINE,
KANHAN AREA
WESTERN COALFIELDS LTD.**

**PERIOD- MAY 2025 (PRE MONSOON), AUG 2025 (MONSOON), NOV 2025 (POST MONSOON) & JAN 2026
(WINTER)**



Ganway

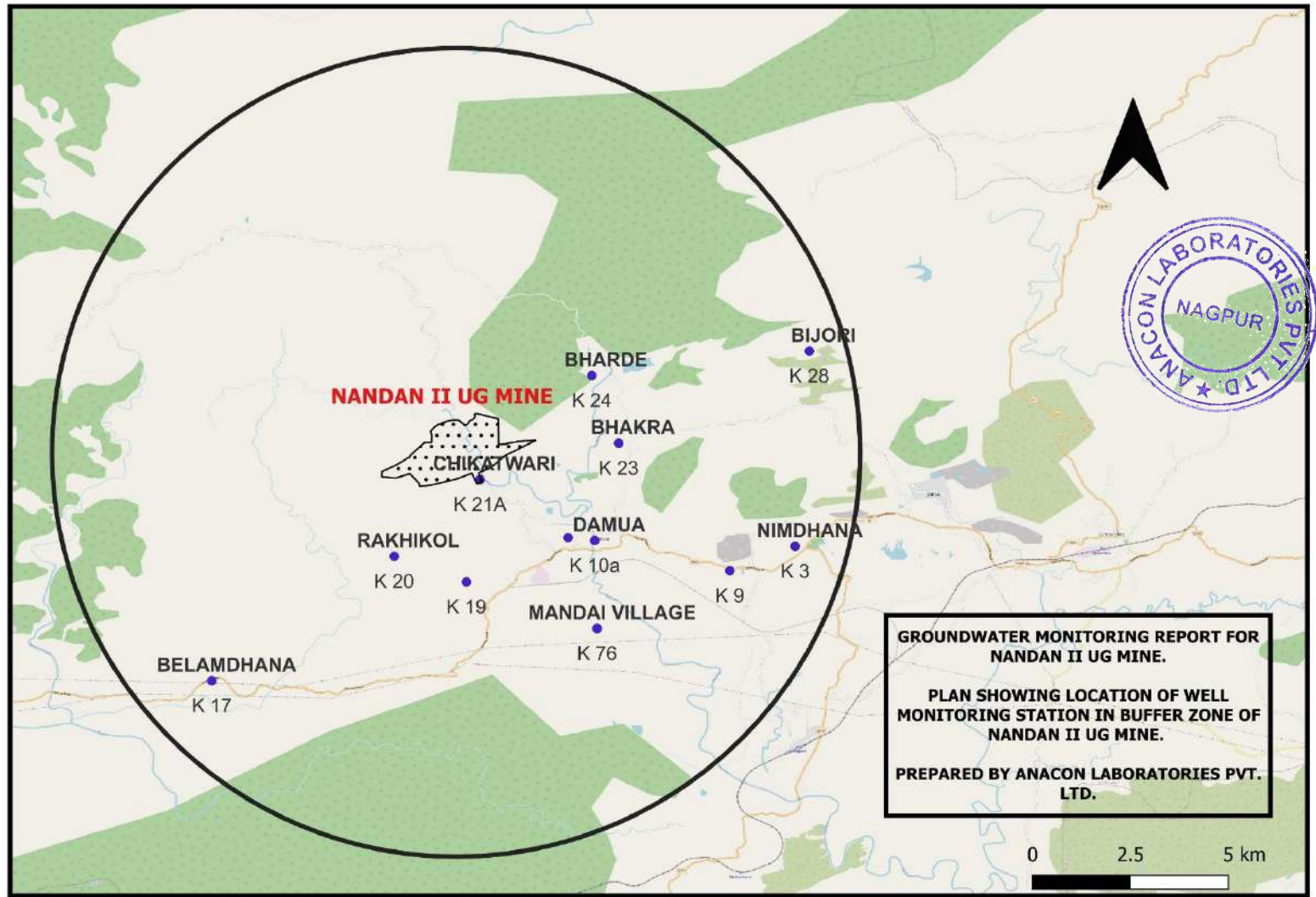


FIGURE I: GROUND WATER MONITORING STATION (OBSERVATION WELLS IN AND AROUND OF NANDAN II UG MINE,)

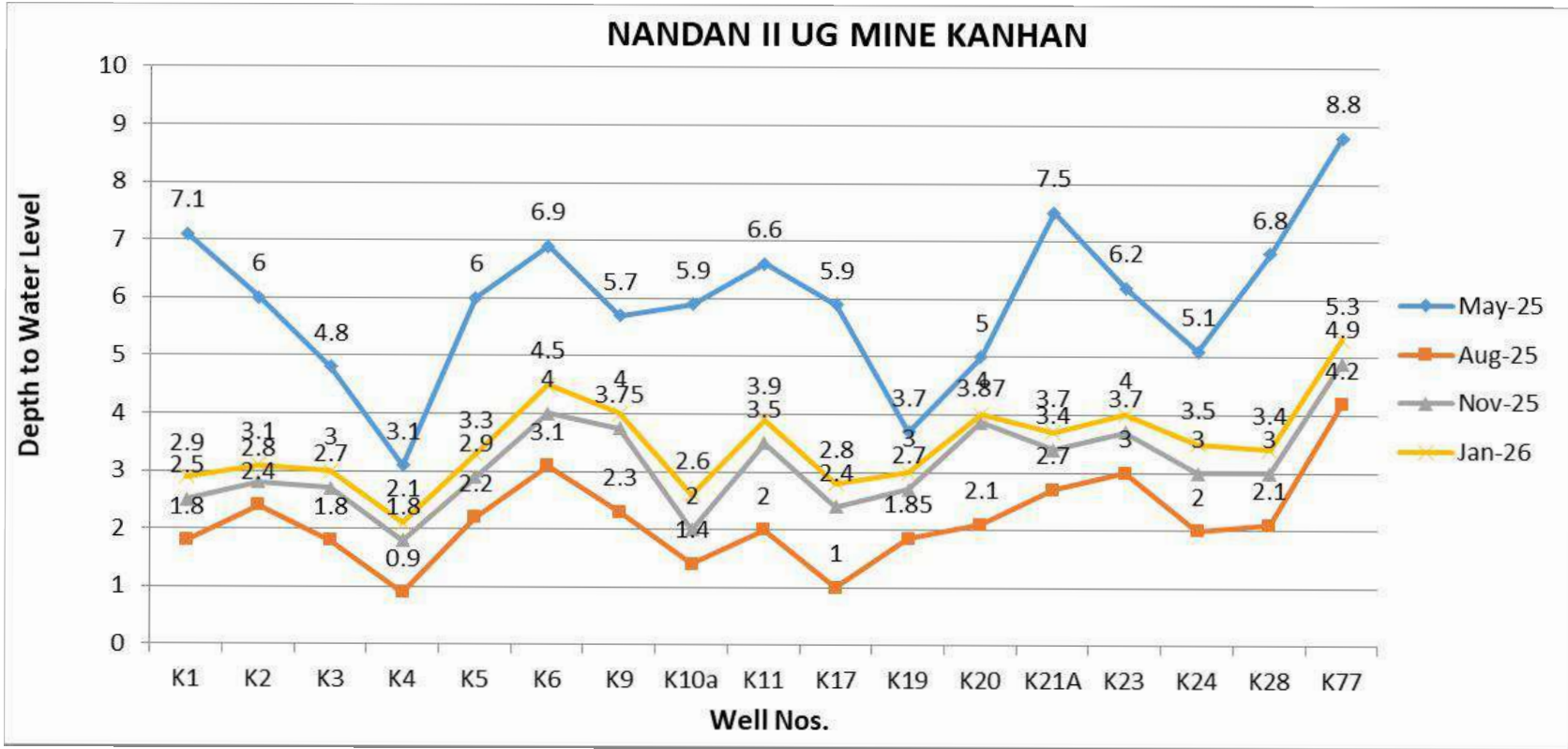
TABLE-I: Ground Water level Monitoring data from dugwells/piezometers in buffer zone of NANDAN II UG MINE KANHAN AREA

SR. NO	Well No. B	Name of vi	Well location	latitude	longitude	R.L. in m	Well depth (m bmp)	Utility	Well diameter	Height of measuring point (m agl)	Depth to Water (BGL-Below Ground Level)				G/F
											May-25	Aug-25	Nov-25	Jan-26	
1	K1	DURGARIA (3.5)	In the compound of Mr. B.S. Rajput South of Road	22°11'44.26"	78°32'52.73"	750	10.10	Domestic	3.70	0.75	7.10	1.80	2.50	2.90	M/B sandstone
2	K2	KOLIYA (Nishari talab)	Back side of H/O ASHARUNARE near small Dam	22°12'1.94"	78°32'27.07"	754	9.20	Domestic	3.70	0.65	6.00	2.40	2.80	3.10	M/B sandstone
3	K 3	NIMDHAN A	North of junction of Damua & Nayagaon Road	22°11'30.39"	78°30'58.68"	785	7.80	Domestic	3.2	0.4	4.80	1.80	2.70	3.00	M/B sandstone
4	K4	BICHHUA	In the openfield of Mr Budhu Near G.P. Office	22°10'51.06"	78°31'42.48"	699	4.10	Domestic	3.50	0.35	3.10	0.90	1.80	2.10	Talchir
5	K5	HIRDAGAR H CHOWK	Near chowk in the compound of Mr. Binod Kumar Vayas	22°9'9.43"	78°31'16.79"	678	7.50	Irrigation	7.50	0.50	6.00	2.20	2.90	3.30	Talchir
6	K6	CHINDIKA MAT (Road)	About 200m North of Kanhan bridge centre of small village	22°8'2.28"	78°30'54.87"	725	10.20	Domestic	6.20	0.50	6.90	3.10	4.00	4.50	Talchir
7	K 9	GHORAWARI BAZAR	Opposite CHANIPAN PALACE	22°11'8.64"	78°30'0.48"	745	CLOSED	Domestic	CLOSED	CLOSED	5.70	2.30	3.75	4.00	M/B Sandstone
8	K 10a	DAMUA	On the road side Junnardeo-sarni near telephone tower	22°11'35.58"	78°28'0.10"	718	8.60	Domestic	7.2	0	5.90	1.40	2.00	2.60	M/B sandstone
9	K 11	DAMUA (UPKARCHOWK)	About 100 m North of Khan Niwas	22°11'38.06"	78°27'36.33"	719	9.20	Domestic	2.9	0.7	6.60	2.00	3.50	3.90	M/B sandstone
10	K 17	BELAMDHANA	In the compound of premlal yadubansi	22°9'30.71"	78°22'19.01"	665	9.50	Domestic	4.6	0.8	5.90	1.00	2.40	2.80	Talchir
11	K 19	MARKA DHANA	On Road to Rakhikol in the openfield	22°10'58.67"	78°26'5.72"	669	5.50	Irrigation	6.6	0	3.70	1.85	2.70	3.00	Talchir
12	K 20	RAKHIKOL	Opposite managers office	22°11'21.44"	78°25'1.34"	705	7.90	Domestic	5.7	0.25	5.00	2.10	3.87	4.00	M/B sandstone

SR. NO	Well No. B	Name of vi	Well location	latitude	longitude	R.L. in m	Well depth (m bmp)	Utility	Well diameter	Height of measuring point (m agl)	Depth to Water (BGL-Below Ground Level)				G/F
											May-25	Aug-25	Nov-25	Jan-26	
13	K 21A	CHIKATWARI	In the low lying openfield opp house of KAMALBATI	22°12'29.83" "	78°26'17.82" "	758	11.30	Domestic	5.2	0.2	7.50	2.70	3.40	3.70	M/B sandstone
14	K 23	BHAKRA	In the house of Dilip Behari	22°13'2.18" "	78°28'21.45" "	719	9.80	Domestic	5.4	0.6	6.20	3.00	3.70	4.00	M/B sandstone
15	K 24	BHARDE	In the house of Munibai	22°14'2.44" "	78°27'57.525" "	720	8.15	Domestic	5.6	0.4	5.10	2.00	3.00	3.50	M/B sandstone
16	K 28	BIJORI	Centre of village in the field of Montilal	22°14'24.25" "	78°31'11.25" "	692	12.08	Domestic	4.7	0.65	6.80	2.10	3.00	3.40	Weathered Basalt
17	K 77	UMRADI	Near Radhika General Store	22°15'14.74" "	78°32'15.69" "	690	14.50	Domestic	5.40	GL	8.80	4.20	4.90	5.30	M/B Sandstone



Ganway



II-FIGURE:- HYDROGRAPH OF of NANDAN II UG MINE KANHAN AREA



K1-DUGARIA



K2-KOLIYA



K3-NIMDHANA



K4-BICHHUA



K5-HIRDAGARH CHOWK



K6- CHINDIKAMAT (Road)



K9-GHORAWARI BAZAR



K10A-DAMUA



K11-DAMUA (UPKARCHOWK)



K17-BELAMDHANA



K19-MARKA DHANA



K20- RAKHIKOL



K21A- CHIKATWARI



K23-BHAKRA



K24-BHARDE



K28-BIJORI



K77-UMRADI

Mine wise details of Mine Closure Plan as Approved by WCL Board in 252nd meeting held on 6th February 2014

Sl. No.	Name of Project	Total Project area as per EC (ha)	Closure Cost@ Rs in lakhs/ha	Life as on 01.04.2012 in years	Corpus as on 2009 in Rs Lakhs	WPI considered for current value	Current value in lakhs	Annual Corpus in Rs Lakhs in 2012-13	Total Corpus in Rs Lakhs
1	Gharawari OC	1296.011	6.00	25	7776.06	April'12	9810.07	392.40	18728.11
2	Datia OC	57.753	6.00	0.00	346.51	April'12	437.14	437.14	437.14
3	Padmapur OC	829.19	6.00	9	4975.14	April'12	6276.50	697.38	7689.71
4	Hindustan Lalpeth OC	311.66	6.00	11	1869.96	April'12	2359.09	214.46	3046.79
5	Juna Kunada OC	186.00	6.00	10	1116.00	April'12	1407.91	140.79	1770.84
6	Ukni OC	1285.12	6.00	16	7710.72	April'12	9727.64	607.97	14383.05
7	Extention of Nandan-II UG	656.14	1.00	10	656.14	April'12	827.76	82.77	1041.07
8	Ambara OC	162.153	6.00	9	972.91	April'12	1227.39	136.37	1503.69
9	Damua UG	1080.918	1.00	21	1080.918	April'12	1363.65	64.93	2319.25
10	Pathakhera-I UG	248.50	1.00	0.00	248.50	April'12	313.50	313.50	313.50
11	Pathakhera-II	281.37	1.00	0.00	281.37	April'12	354.99	354.99	354.99
12	Satpura-II UG	458.00	1.00	0.00	458.00	April'12	577.80	577.80	577.80
13	Gouri Deep OC	356.11	6.00	21	2136.66	July'13	2891.75	137.70	4918.54

Chapter - 1

INTRODUCTION

1.1 About the Mine.

Nandan underground comprises of two units namely Nandan-I and Nandan-II and is under Kanhan Area of Western Coalfields Limited, a subsidiary of Coal India Limited. Coal reserve in Nandan-I mine(1&2 incline) has been exhausted and mine abandonment notice has been given since 1st July 2013. Production in Nandan-II mine (in 3&4 incline) has been stopped since last six years for further drivage to enter into the virgin patch of Dhau North block. The whole mine was earlier developed by bord & pillar method and depillared by caving method

The EC for Nandan UG covers both the mines namely Nandan-I UG(incline 1&2) and Nandan-II UG(incline 3&4) with area of 543.50ha. A block namely Dhau North lying on the dip side of Nandan-II UG is envisaged to be approached through present entries of Nandan-II UG mine. A scheme for extension of Nandan-II UG mine into Dhau North has been approved by WCL Board. The Process of obtaining EC by including Dhau North UG block with existing Nandan UG has begun by way of submission of form-I for land area of 656.14ha (i.e by including land required for Dhau North UG to existing Nandan UG mine area of 543.50 ha). This Mine Closure Plan has been prepared considering continuation of Nandan-II UG mine by extending into Dhau North block.

Total project Area of Nandan UG including Dhau North is 656.14 ha. Life of mine is 10 years as on 1.04.2012. The financial provision for Mine Closure Plan of this mine at present works out to around Rs 1041.07 lakhs (Based on April 2012 WPI)

The salient features of the project are as under.

1.1.1 Name of mine owner/company

Project : Nandan UG
Area : Kanhan
Company : Western Coalfields Limited
Mine Owner : Director (T) (P&P), WCL

1.1.2 Address for communication with Pin and Phone Nos.

Project : Nandan UG

Post Office : Nandan
Tahsil : Junnardeo
District : Chhindwara
State : Madhya Pradesh
PIN : 480554
Telephone : (07160) 264026

1.1.3 Location of Mine

Project : Nandan UG
Area : Kanhan
Coalfields : Kanhan Coalfield
Latitude : N22°11'35" to 22°14'08"
Longitude : E78°23'59.4" to 78°28'54"

1.1.4 Date of starting.(1&2)

Date of start of development work : Oct 1973 (1&2 Inclines)
Date of start of production : April1975 (1&2 Inclines)

1.1.4 Date of starting. (3&4Inclines)

Date of start of development work : 13 March 1982 (3&4 Inclines)
Date of start of production : Feb 1985 (3&4 Inclines)

1.1.5 Total project area of the mine: 656.14 ha

1.1.6 Communication

Nandan mine is connected with district head quarter of Chhindwara by pitch road at a distance of about 70 Km. The Amla-Chhindwara broad gauge railway line is passes through south of the area. Nearest Railway Station being Hirdagarh is at a distance of 17Km.

1.1.7 Topography of the Area.

The area is characterised by undulating terrain with prominent ridges towards North and South .The prominent elongated ridges of quartzite sand stone indicate the surface position of faults. High hills are generally composed of Deccan trap flow. The general elevation of the area varies from 763m to 883m.

1.2 Reasons for closure.

The reason for closure of mine is exhaustion of coal from approved PR limits.

1.3 Need of mine closure planning.

1.3.1 Mining activities leave long lasting impacts on the landscape, ecology and on local inhabitants. These activities disturb the delicate environmental and social equilibrium that exists in its area of influence. Hence it becomes imperative on part of the mine operator to restore the equilibrium in the mine affected area that existed in the pre-mining period. Thus, any mining venture must have adequate closure plan, aimed at rehabilitation of disturbed area. This should be acceptable to local community as well as regulatory authority.

1.3.2. Mine closure encompasses rehabilitation process designed to restore physical, chemical and biological quality disturbed by the mining activities. Mine closure is not just something that happens at the end of a mines life rather mine closure is an ongoing series of decision and activities beginning in the pre-mining stage of mine and ending with a sustainable site that can be returned to the community.

1.3.3. Thus, a Mine closure plan needs to define the liabilities, responsibilities and authorities of the different agencies like the mine management, other regulatory bodies, Central and State Governments after mine closure. Various objectives of the advance mine closure planning are as follows:

- a. To allow productive and sustainable after-use of the site, this is acceptable to the mine owner and the regulatory authority.
- b. To protect public health and safety.
- c. To eliminate environmental damage and thereby encourage environmental sustainability.
- d. To minimize adverse socio-economic impacts of mining activities.
- e. To protect the flora and fauna of the area affected by the mining.
- f. Effective use of the assets created in course of mining.

1.3.4 Primarily, the mine closure activities are planned in two stages the initial plan identifies and activities required to be executed as the mining operation progresses after the inception of the project. These activities may undergo subtle changes depending upon the actual site condition during implementation. Finally, a detailed closure plan is to be prepared 4-5 years before closure time of the mine depending upon the existing parameters at that point of time.

1.4 Mine closure planning strategy in respect of Nandan uderground Project based on existing set of parameters.

The life of the mine is 10 years as on 1.04.2012, hence following activities are envisaged towards mine closure programmed in respect of Nandan UG mine(including Dhau north).

Mine closure activities will continue as envisaged in the approved Project report/scheme and as enumerated in the various approvals, permits, consents etc for which adequate financial provision is available.

1.5 Statutory Obligations.

The statutory obligations on part of the mine operator have been enumerated in various approvals, permits, consents etc. such as lease deed, approved Mining Plan, approval obtained from MoEF, approval/ consent from State Pollution Control Board and the other relevant statutes. Copies of the relevant approvals/clearances are enclosed.

All the applicable obligations are being strictly complied with and regular reports, wherever required is being sent to respective authorities.

Chapter - 2

MINE DESCRIPTION/MINING PARAMETERS.

2.1 Geology in Brief.

The area under consideration is characterized by different litho types of motur formation in the plain and low lying parts and Deccan trap on the hilly region. The faults traversing the area generally stand out as elongated ridges composed of silicified and calceous rocks. The exposures of dolerite dyke also stand out as prominent narrow ridges. The Barakar strata are not exposed in this area. This is about 300 m thick in this area, out of which the upper 20-50m and lower 200m portion are barren and devoid of any correlatable coal horizon.

S.No	Fault	Type	Direction of throw	Total amount of throw in M	Remarks
1	Bagdeo Fault	Oblique	South	100m	*
2	Nandan Fault	Oblique	South	40-80m	**
3	Kanhan Fault	Oblique	North	100m	***
4	Burnala Fault	Oblique	North-East	100m	****

* Situated at south & demarcates southern limit of Nandan colliery.

** Situated in middle of the area divides the property for double entries i,e (1&2 and 3&4 inclines)

*** Situated at north & demarcates northern limit of Nandan colliery.

**** Situated at east & demarcates eastern limit of Nandan colliery.

The sector of Nandan patch consists of coal horizons from Seam MEC III (Top) to Seam MEC I in descending order. The Seam II and Seam I are not mineable as these are mostly thin seams.

Lithology	General Range in Thickness(m)	Remarks
Sand stone with shale &carb shale.	20 to 50	
Coal seam MEC III(Top)	3 to 4	Workable seam
Parting	4 to 9	
Coal seam MEC III(Bottom)	0.8 to 1.0	
Parting	3 to 9	
Coal seam MEC II	0.6 to 0.8	Virgin not workable
Parting	3 to 8	
Coal seam II	0.8 to 1.0	Virgin not workable

2.2 Brief description of mining system.

2.2.1 Presently there are no any system of workings. Coal reserve in Nandan-I mine has been exhausted and workings in 3&4 has been temporarily discontinued. Coal seam-III(comb)/III(T) in Dhau-North is Presently virgin.

2.2.2 Seam-wise Mine Details.

Details about the seams which are virgin/being worked/ have already been worked along with mine entry specifications, production figure and equipment population has been shown in the following tables.

Table-1
Mine Entry details.

Pit/Inc	Depth/length	Dia(m)/X-Sec.Sq. mt	Purpose	Usage	Present status
Inc.1	292m	4.8x3.2	Intake	Men&Materials	Sealed off
Inc.2	264m	4.8x3.2	Intake	Belt conveyor& Travelling.	Sealed off
Shaft	59m	4.8	Return	Air shaft	Sealed off
Inc .3	302m	4.5x2.4	Intake	Intake&Haul	Temporarily

Inc .4	292m	4.2x2.4	Return	.Return with fan&Travelling roadway.	discontinued
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Table-3 Performance for last 5 years. (1&2inclines)

		Year				
		2007-8	2008-09	2009-10	2010-11	2011-12
Production	M t	0.21820	0.15890	0.14660	0.074855	.073620
OMS	t	0.97	0.74	0.76	0.44	0.50
CPT	Rs/t	1587.52	2481.41	2980.19	5773.57	7118.17
SPT	Rs/t	1305.64	1384.54	1451.99	1525.98	1535.51
Profit/Loss	Rs/t	(-)281.18	(-)1096.87	(-)1528.20	(-)4247.59	(-)5582.66
Total Profit/Loss	Rs Lakhs	(-)615.06	(-)1742.92	(-)2240.34	(-)3179.53	(-)4096.00

Performance for last 5 years. (3&4inclines)

		Year				
		2007-08	2008-09	2009-10	2010-11	2011-12
Production	Mt	Nil	Nil	Nil	Nil	Nil
OMS	t	Nil	Nil	Nil	Nil	Nil
CPT	Rs/t	Nil	Nil	Nil	Nil	Nil
SPT	Rs/t	Nil	Nil	Nil	Nil	Nil
Profit/Loss	Rs/t	Nil	Nil	Nil	Nil	Nil
Total Profit/Loss	Rs Lakhs	(-)676	(-)672	(-)501	(-)730	(-)1000.51

2.3 Balance reserve and life of mine.

Balance reserve of Nandan-II UG mine is 0.08 Mt and balance reserve of Dhau North is 2.07 Mt. Therefore total balance reserve is 2.15 Mt.

The yearwise coal production programme is given below

year	Coal Production(Mt)
1	Gestation period work
2	Gestation period work
3	0.09
4	0.36
5	0.36
6	0.36
7	0.36
8	0.36

9	0.26
Total	2.15

2.4 Mine Boundary of proposed extension of Nandan-2 UG in Dhau-North Block.

North : 18% VM(unit coal) line in Seam-III/III(T) in sector S2
South : Kanhana Fault(F1-F1)
West : 200m influence line of boreholes KDN-15 (Arbitrary line)
East : 200m influence line of boreholes KDN-7 & 6 and NCKD-33 (Arbitrary line)

2.5 Surface water bodies & their status.

The Kanhana River is running from North to South direction through middle of the property of Nandan mine. There is some restrictions during monsoon for the workings of 3 and 4 inclines. HFL of Kanhana river near to openings of 1&2 inclines is 767.3m and RLs of Inc. No.1 and Inc.no.2 are 781.4 & 780.9 which is 13.6m above the HFL of Kanhana River. HFL of Kanhana river nearer to openings of 3&4 inclines is 771.74m and RLs of Inc. No.3 and Inc.no.4 are 774.74 which is 3.0mt above the HFL .As per DGMS permission the warning level of the openings of 3&4 inclines is 768.30m.

2.6 Maximum depth of the UG workings.

The maximum depth of UG working is 425m which is dip most point of the workings of incline no 3&4.

2.7 Coal processing/beneficial operation.

There is no CHP, coal is handled by surface bunker having capacity of 120t at 1&2 inclines & 60t at 3&4 inclines.

Chapter - 3

CLOSURE PLAN AND RELATED ACTIVITIES.

3.1 Mined out land & proposed final land use

3.1.1 Management of mined out area.

a. As the project is an underground mining project, where development as well as depillaring with wide stall method of mining was done keeping factor of safety as 1.5, as per permission obtained from DGMS and no subsidence was noticed and as such there has been no damage to the surface in Nandan 1/2 and 3/4 inclines.

b. In Dhau North UG where future mining operations are projected, due to depth of more than 200 m, the impact of subsidence on surface is likely to be minimal or nil. Hence minimal damage to surface is envisaged and minor cracks/damage(if any) will be filled up with incombustible materials and levelled to maintain the original ground profile.

c. As regards the underground void which will remain at the time of closure of the mine, they will be filled up gradually with water. Further, the water filled in UG voids will help in maintaining the water level in the nearby Area.

3.1.2 Details of past subsidence and reclamation of subsided land.

As experienced earlier, due to depillaring operation by caving method no subsidence has been recorded, except some cracks at some areas. Due to presence of motur formation these are filled up automatically after monsoon. In view of the above there will be no damage at the surface land.

3.2 Water Regime management

3.2.1 Drainage pattern of the area(pre and post closure)

Existing drainage pattern

The whole area of the mine is hilly terrain. The elevation from MSL varies from 763m to 795m. The Kanhan River is the main drainage channel of the area which flows from North to South direction at a maximum distance of 380m from the incline no1&2.

Post closure drainage pattern

Since no subsidence is likely to take place hence after closure of mine the natural profile of the entire project area would not be disturbed. Therefore the general drainage pattern would not be disturbed. However, if required the natural drainage profile of the entire project area would be kept in a manner which will facilitate the normal run-off.

3.2.2 Mine water discharge details
Mine water discharge details.

- a. Mine water will be pumped in a water tank. Clean water coming out from the water tank will be used for dust suppression and other industrial uses.
- b. Excess pumped out mine water after proper treatment will be allowed to flow into the surface natural water courses.

Post closure Mine water discharge.

Once the reserve is exhausted, the entries into the mine would be securely sealed for safety purposes. Hence, there will not be any discharge from the mine. However, if for the safety of the future mine or any neighboring mine, pumping is required from the presently worked seams, then the arrangements for pumping will be kept intact and the water shall be discharged into the surface water bodies after passing the same through settling tank on the surface.

3.2.3 Water Quality Monitoring

Present Practice

Quarterly samples of mine water are collected and tested by CMPDI. Results of water testing pertaining to a particular quarter are obtained and compared with MoEF standard.

Present Status of Water Quality

Because of the nature of strata available in the project area, any case of contamination of ground water from leaching or any case of acid mine drainage have not been detected so far.

Test results of the samples collected from the surface water bodies have shown that the water quality of surface water bodies is matching with the standards prescribed by MoEF.

Results of various quality checks have been furnished below in tabular format.

DRINKING WATER QUALITY REPORT

MINE WATER QUALITY**EFFLUENT WATER QUALITY MONITORING DATA**

NAME OF THE COMPANY : WCL YEAR : 2012
 NAME OF THE AREA : KANHAN Q.E. : JUN.
 NAME OF THE PROJECT : NANDAN UG

Name of the Location : Mine water discharge - KNUW-1

Month	Date of Sample collection	Analysis Results			
		pH	TSS (mg/l)	COD (mg/l)	O & G (mg/l)
APR. 2012	08.04.12	6.85	46	80	BDL
APR. 2012	23.04.12	7.46	24	40	BDL
MAY. 2012	10.05.12	7.48	26	40	BDL
MAY. 2012	22.05.12	7.67	22	40	BDL
JUN. 2012	05.06.12	7.40	28	40	BDL
JUN. 2012	22.06.12	7.42	60	140	BDL
TLV as per Env.(Protection) Amendment rule 2000		5.5 - 9.0	100	250	10

(BDL - Below Detectable Level- Value < 1.0 mg/l)

Well Water Level monitoring report

Groundwater monitoring data of dugwells in buffer zone of Nandan UG mine,Kanhana Area

Well No.	Name of village	Well location	Owner	Utility	Well dia (m)	Height of measuring point (m agl)	Well depth (m bmp)	WATER TABLE(m-bmp)				Formation Tapped
								May'11	Aug'11	Nov'11	Jan'12	
K												
2	KOLIYA (Nishtari talab)	Back side of H/O ASHARU NARE Near small Dam	G.P.	Domestic	4.60	0.70	12.00	7.25	0.35	1.25	0.55	M/B sandstone
3	NIMDHANA	North of junction of Damua & Nayagaon Road (Hirdagarh Rly. Siding)	G.P.	Domestic	3.40	0.85	8.55	5.45	0.05	1.30	1.75	M/B sandstone
4	BICHHUA	In the openfield of Mr Budhu Near G.P. office	Private	Domestic	3.45	0.40	4.55	2.80	0.00	0.50	0.90	Talchir
8	GHORAWARI (CGWB)	In the openfield near School side of road Jamai KM/11	GP	Domestic	4.00	0.80	6.50	2.40	0.50	0.70	0.70	MB Sandstone
9	GHORAWARI BAZAR	Opposite CHANIPAN PALACE	Rakesh Suryabansi	Domestic	8.25	0.60	11.45	5.55	0.35	0.70	3.40	M/B sandstone
11	DAMUA (UPKARCHOWK)	About 100 m North of Khan Niwas	G.P.	Domestic	2.90	0.90	17.55	10.80	1.40	5.25	7.40	M/B sandstone
12	DONGARIA (BHARTAGARH)	Near G.P. office	G.P.	Domestic	4.25	0.70	6.55	Dry	1.35	1.80	Dry	Taalchir

13	MANDAI	Back side of House of Shaktilal Partik	Shaktilal Partik	Domes tic	4.25	G.L	12.20	11.70	7.40	8.95	9.50	Talchir
14	BIRAJPU RA	In the openfield Near Road Junction opp. Chamanlal house	Chhanul al	Irrigati on	2.80	G.L	10.85	14.05	NA	NA	13.55	Talchir with Dolerite dyke
15	HARYAG ARH	Near L.P school & big talab	Ramesh Yadubansi	Domes tic	4.80	G.L	10.75	Dry	NA	NA	10.50	Talchir
16	PINDARAI	Centre of village H/O Premlal	Prem lal	Domes tic	3.20	G.L.	7.55	NA	NA	NA	NA	Talchir
17	BELAMD HANA	In the compound of premlal yadubansi	Premala l Yadubansi	Domes tic	8.60	0.55	10.35	6.95	4.60	5.15	5.95	Talchir
18	BHARDA GARH	Locally Known on Thapakua In the Valley near school	G.P.	Domes tic	3.60	GL	4.05	2.07	0.17	0.20	0.45	Talchir
19	MARKA DHANA	On Road to Rakhikol in the openfield	Private	Irrigati on	6.05	0.95	7.57	1.75	0.60	1.05	1.20	Talchir
20	RAKHIKOL	Opposite managers office	WCL	Domes tic	3.35	0.85	7.10	3.35	1.35	2.95	3.45	M/B sandstone
21	CHIKATWARI	Extreme North of village about 100 m west of Eklama Road in the field	Rojgar Yojna	Domes tic	5.40	0.60	9.00	Dry	Dry	Dry	4.70	
23	BHAKRA	In the house of Dilip Behari	Private	Domes tic	3.90	0.45	12.00	10.75	2.85	3.95	9.35	M/B sandstone
24	BHARDE	In the house of Munibai	Shymlal	Domes tic	3.90	0.45	9.05	6.80	3.60	4.40	5.85	M/B sandstone

27	UMRAI	In the compound of Ramesh	G.P.	Domestic	4.35	0.75	10.50	5.85	1.30	4.65	5.05	M/B sandstone
28	BIJORI	Centre of village in the field of Montilal	G.P.	Domestic	3.90	0.70	8.90	6.10	1.25	1.90	3.05	Weathered Basalt

Note: m.bmp-meter below measuring point, m agl-meter above ground level, m.bgl-meter below ground level, D-Domestic, I-Irrigation, GP-Gram Panchayat, DCB-Dug cum borewell, TW-Tube well

Practice after the closure

The above practice of monitoring of quality of water would be continued for a period of 3 years after the cessation of mining activities. If required, corrective action/steps would be taken to mitigate any adverse effect on local water regime. The responsibility of maintaining the quality of drinking water will be entrusted on the State Authorities after 3 years of mine closure.

3.3 Air quality management

3.3.1 Present practice

The quality of air is monitored on regular basis by drawing samples from the various residential and non-residential areas of the project. The test results are compared with the standards prescribed by the MoEF & CPCB.

The test results of recent sampling are as under:

AIR QUALITY MONITORING DATA

NAME OF THE COMPANY : WCL YEAR : 2012
 NAME OF THE AREA : KANHANA Q.E. : JUN.
 NAME OF THE PROJECT : NANDAN UG

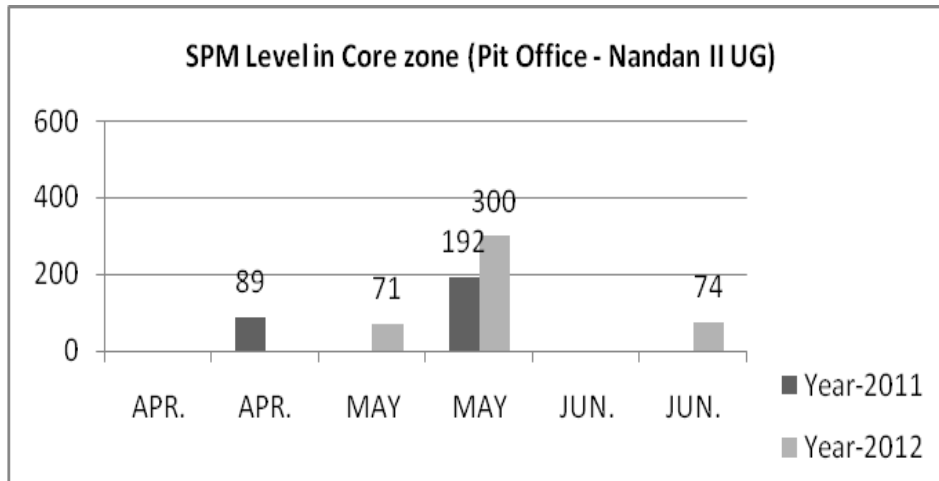
1. SAM Office - Nandan-I UG : KNUA-1							
(24 hourly values in $\mu\text{g}/\text{m}^3$)							
Month	Dates of Sampling			Parameters			
	From	-	To	SPM	PM-10	NO _x	SO ₂
MAY. 2012	09.05.12	-	10.05.12	87	33	2	2

JUN. 2012	22.06.12 - 23.06.12	107	45	3	2	
TLV as per Env.(Protection) Amendment Rule 2000		600	300	120	120	
2. Pit Office - Nandan-II UG : KNUA-2						
(24 hourly values in $\mu\text{g}/\text{m}^3$)						
Month	Dates of Sampling		Parameters			
	From	To	SPM	PM-10	NO _x	SO ₂
MAY. 2012	09.05.12	10.05.12	71	38	2	1
MAY. 2012	18.05.12	19.05.12	300	103	4	3
JUN. 2012	22.06.12	23.06.12	74	31	2	1
TLV as per Env.(Protection) Amendment Rule 2000		600	300	120	120	

3. Health Center – Nandan UG : KNUA-3						
(24 hourly values in $\mu\text{g}/\text{m}^3$)						
Month	Dates of Sampling		Parameters			
	From	To	SPM	PM-10	NO _x	SO ₂
APR. 2012	07.04.12	08.04.12	150	59	3	2
APR. 2012	23.04.12	24.04.12	117	53	2	1
MAY. 2012	10.05.12	11.05.12	110	43	3	2
MAY. 2012	23.05.12	24.05.12	127	67	3	1
JUN. 2012	05.06.12	06.06.12	150	70	3	2
JUN. 2012	23.06.12	24.06.12	83	25	2	1
PERMISSIBLE LIMIT			200	100	80	80

4. Nandan Water Filter Plant : KNUA-4						
(24 hourly values in $\mu\text{g}/\text{m}^3$)						
Month	Dates of Sampling		Parameters			
	From	To	SPM	PM-10	NO _x	SO ₂
APR. 2012	07.04.12	08.04.12	191	85	3	2
APR. 2012	23.04.12	24.04.12	192	80	3	3
MAY. 2012	09.05.12	10.05.12	99	41	2	1

MAY. 2012	23.05.12 - 24.05.12	188	77	3	2
JUN. 2012	05.06.12 - 06.06.12	108	60	2	2
PERMISSIBLE LIMIT		200	100	80	80



NOISE LEVEL DATA

NAME OF THE COMPANY : WCL YEAR: 2012
 NAME OF THE AREA : KANHANA Q.E. : JUN.
 NAME OF THE PROJECT : NANDAN UG

Name of the Location : Near Fan House (Nandan UG-II) - KNUN-1

Month	Date of Data collection	Noise Level in dB(A)		Remarks
		Day Time	Night Time	
APR. 2012	08.04.12	71.5	68.6	
APR. 2012	23.04.12	68.5	66.8	
MAY. 2012	09.05.12	67.8	65.7	
MAY. 2012	22.05.12	68.9	66.2	
JUN. 2012	11.06.12	66.2	64.9	

JUN. 2012	22.06.12	69.3	66.2	
Noise Level Standard as per Env. (Protection) Amendment rule 2000		75	70	

Name of the Location : Colony - KNUN-2

Month	Date of Data collection	Noise Level in dB(A)		Remarks
		Day Time	Night Time	
APR. 2012	08.04.12	50.7	40.3	
APR. 2012	23.04.12	51.6	42.7	
MAY. 2012	09.05.12	52.3	42.3	
MAY. 2012	22.05.12	50.2	41.9	
JUN. 2012	11.06.12	49.1	40.2	
JUN. 2012	22.06.12	51.1	41.9	
Permissible Limit		55	45	

3.3.2 Practice after the closure of the mine

- a. As the sources of dust and fume generation would no longer be present, the present practice of arresting the air pollution, would no longer be required after the closure of the mine.
- b. Quality of air would be monitored for a period of 3 years after the cessation of mining activities. Efforts would be made to bring the air quality to the pre-mining standard.

3.4 Disposal of buildings, Plants & Machinery.

3.4.1 Infrastructure details.

Presently, the project has following infrastructure

(1&2 Incline)

a. **CHP- Coal handling arrangement at surface with capacity of bunkers.**

CHP Bunker Capacity : 120t (at 1&2 inclines)

b. **Workshop- Size with major equipment**

Size : 45m x 16m

Equipments

Lathe machine : 01 No.

Lathe machine (R.B Threader) : 01 No.

Drill machine (Radial) :01 No.

Drill machine (Pillar) :01 No.

Vulcanizing machine : 01 No.

Grinder machine : 01 No.

Air Compressor : 01 No.

Shaper machine : 01 No.

Welding machine : 02 No.

Hacksaw machine : 01 No.

Air Blower : 01 No.

c. **Colony (Number & Type of quarters)**

There are 285 nos. private houses and no company quarter within mine boundary of Nandan UG Mine.

3&4 Inclines

a. **CHP- Coal handling arrangement at surface with capacity of bunkers.**

CHP Bunker Capacity : 60t(at 3&4 inclines)

b. **Workshop- Size with major equipment**

Size : 36m x 12.5m

Equipments

Lathe machine : 01 No.

Drill machine : 01 No.

Grinder machine : 02 No.

Shaper machine : 01 No

Balding Machin : 01.No

Hacksaw machine : 01No

Nihau : 01No.

d. Water supply arrangement.

Water pumped out from the goaved out area of Damua colliery is treated at 1.5 Lakh Gallon / Day filter plant at Nandan. This filter water is supplied to the colonies of Nandan mines directly through pipe line.for drinking & domestic purpose.

e. Details of non-residential building (1&2 inclines)

Office Building (In Block)	: 03
Substation	: 02
Fan house	: 01
Store	: 01
Workshop	: 01
Explosive service Magazine	: 01
Hospital	: 01
Canteen	: 01
Filter Plant	: 01
Lamp room	: 01
CHP bunkers	: 120 tones

Details of non-residential building (3&4 inclines)

Office Building	: 01
Substation	: 01
Fan house	: 01
Store	: 01
Workshop	: 01
Explosive Magazine	: 02
CHP bunkers	: 60 tones

Proposed infrastructure for Dhau North

CHP	:01
Pit office	:01
Third Incline	:01

3.4.2. Post closure disposal/re-use of the Buildings, Plants & Machineries.

The surface infrastructure of Nandan-II UG mine will be utilised for Dhau North, While some of surface infrastructure of Nandan- I UG mine have been dismantled and remaining will be gainfully utilized by Area for other mines.

a. Disposal or reuse of haulage, ventilation fan, CHP, workshop.

At the time of closure of the mine, it is expected that some of the equipments would complete its rated life and would be surveyed off as per the Company's guidelines. The surveyed off equipments would be auctioned.

However, the equipments those have not covered their rated life would be diverted to the neighboring projects for gainful utilization.

As regards CHP/Bunker they will be dismantled and usable items would be dispatched to needy area/projects.

b. Disposal or reuse of transmission lines and sub-station.

As per the electricity demand of the operating neighboring projects, an analysis would be made as to whether the existing sub-station and transmission lines could be gainfully used or not. If the scope of gainful utilization is not found, they will be dismantled and the usable items/spares/conductors etc. would be dispatched to needy Areas/projects.

c. Disposal or reuse of non-residential/service buildings.

Infrastructure available at Nandan-I UG mine i.e. Fan house, store, workshop, Canteen, Explosive magazine, CHP Bunker have been dismantled and lamproom will be dismantled. Remaining infrastructure i.e office building, substation, hospital, filter plant will be gainfully utilized by Area authority for other mines.

Infrastructure available at Nandan-II UG mine will be gainfully utilized for Dhau Norh mine.

3.5 Safety and Security arrangements.

3.5.1 The entries(inclines and air shaft) into the Nandan-I mine have been securely sealed off for safety purposes.

The entries(inclines) into Nandan-II mine would be securely sealed off for safety purposes after exhaustion of coal reserve.

3.5.2 In case the mine entries remain unused for some time, they would be properly fenced to avoid any inadvertent entry of animals or human beings. Flags/Boards with warning signals shall be posted at vulnerable places to avoid chances of accidents.

3.6 Survey records of workings.

All the mine workings areas, roads, ponds, tanks etc. shall be resurveyed and records shall be updated. Copy of such records shall also be submitted to the appropriate

competent authorities, such as DGMS and State Authorities.

3.7 Disposal management of hazardous material.

At the time of closure, assessment would be made as to find whether there is any hazardous material that could cause problem. Such hazardous material e.g. explosives, chemicals, oil etc shall be appropriately disposed off

3.8 Re-deployment of work force.

3.8.1 The current manpower at Nandan-I mine(incline no 1&2) is 130 and Nandan-II mine(incline no 3&4) is 131 as on 1.11.2013 out of these manpower some will be gainfully utilized for Dhau North mine and remaining will be transferred to other mines of area.

3.9 Emancipation from the community facilities.

3.91 The local communities are being provided many civic facilities, such as educational facilities, health facilities and drinking water. At the time of final closure after exhaustion of entire mineable reserve, these facilities will be entrusted upon the local bodies/Trust of local people and state authorities so that same could continue even after the mine closure. If needed a lump sum amount would also be paid to the local bodies/Trust of local people/State bodies for proper upkeep and maintenance of various community facilities.

3.92 To ensure that no financial loss due to the closure of mining activity in the presently worked seam occur to the local community engaged indirectly to the existing mine, following steps would be taken.

➤ It has been seen in the past that in the event of closure of a mine, the local people indirectly dependent on the mine switch over their economic/professional activities in the existing/new or expansion mines located in the nearby area. Local Management, if needed, extends some basic helps to them in such type of switching over. Hence, it is expected that in the instant case also the transition of the local people from one area to the other area for their sustenance would not be any problem.

➤ It is proposed that afforested land will be handed over to State Forest Department for the benefit of local ecosystem. The forest wealth can also be utilized by local people or tribal in the form of fruits and fodders

3.10 Plantation detail: - There is no plantation since last five years.

Chapter - 4

ECONOMIC REPURCUSSION OF CLOSURE OF MINE

4.1. Manpower of the project: - The current manpower of the mine is 261 as on 1.11.2013.

4.2. Assessment of income scenario of local resident employee: -

- (a) Local employees will be redeployed in other projects of the company
- (b) People engaged in indirect employment / ancillary activities will find no financial loss due to the mine closure as their activities will be shifted in the new or expansion mines located in the coalfield area. As such the direct and indirect manpower will not be affected due to mine closure.
- (c) Resettlement / Redeployment of (a) & (b)
- Compensation for loosing employment or income.
 - Vocational training for continuance / sustenance of income level.

Note: After the closure of the mine, the reclaimed leasehold area and any structure thereon, which is not to be utilized by the mine owner, shall be surrendered to the state Govt. Concerned following a laid down procedure as in vogue at that point of time.

The forest wealth can also be utilized by local people or tribal in the form of fruits and fodders.

The water reservoir in the mine voids will be utilized for irrigation, domestic drinking water or stabilizing the ground water regime. Landscaping during closure of mine will make the spot for tourist attraction.

CHAPTER 5

IMPLEMENTATION SCHEDULE FOR MINE CLOSURE IN AN UG MINE

(LIFE OF THE MINE: 9 YEAR FROM 1.04.2013)

SL. NO	ACTIVITY	TIME FRAME	Year													
			1 st Phase					Final Phase				Post Closure Programme				
			1	2	3	4	5	6	7	8	9	PC1	PC2	PC3		
A	Dismantling of Structures															
	Service buildings	2 years														
	Residential buildings	2 & ½ years														
	Industrial structures like Workshop, field sub station etc.	2 & ½ years														
B	Permanent sealing of mine entries(incline mouths and air shaft)															
	sealing of incline mouths and air shaft)	2 years														
C	Subsidence Management	Throughout the life of mine, if required including 3 years after cessation of mining operation														
D	Landscaping															
	Landscaping of the cleared land for improving its aesthetic	Throughout the life of mine including 3 years after cessation of mining operation														
E	Plantation															
	Plantation over leasehold area and on other open spaces	Throughout the life of mine including 3 years after cessation of mining operation														
F	Post Closure Env. Monitoring/ testing of parameters for three years	3 years														
G	Entrepreneurship Development(Vocational/skill development) training for sustainable income of affected people.	Throughout the life of mine														
H	Miscellaneous and other mitigative measures	Throughout the life of mine including 3 years after cessation of mining operation														
I	Post Closure Manpower cost for supervision	3 years after mine closure														

PC1 : Post Closure Year 1,

PC2: Post Closure Year 2,

PC3: Post Closure Year 3

CHAPTER-6

MINE CLOSURE COST

- 6.1 The mine closure cost will cover the following activities for which a corpus fund will be created by opening an escrow account with the coal controller organization in nationalised bank. In case of occurrence of acid mine drainage, post closure acid mine drainage management cost shall also be included in the total closure cost. An amount @ Rs 1.00 lakhs per Ha of the project area will be deposited in this account for final mine closure. Progressive mine closure will be done with the fund provided in approved report.
- 6.2 The above rate has been taken from Circular No. 55011-01-2009-CPAM, Government of India, Ministry of Coal, Dated 27 August 2009 duly updated on 7th January 2013
- 6.3 Type of Mine : Under Ground mine Life of mine(1.04.2012) 10 years
Total project area of the mine: 656.14 ha.
The financial provision for closure of Nandan Under ground mine comes to around Rs. 1041.07 lakhs (based on April 2012 WPI at the @ Rs 1 lakh/ Ha.
- 6.4 Mine closure cost break-up for Nandan Under ground mine is hereunder:-

Sl. No	Activity	% of Total Mine Closure Cost	Amount (Rs Lakhs)
A	Dismantling of structures		
	Service Building	3.50%	36.44
	Residential Building	37.58%	391.23
	Industrial Structures like CHP/Bunker, Workshop, Field Substation, Cap lamp room, Haulage, Fan Installation etc.	6.33%	65.90
B.	Permanent sealing of mine entries (incline mouth and air shaft.)		
	Sealing of incline mouths and air shafts.	2.32%	24.15
C.	Subsidence Management.	1.75%	18.22
D.	Landscaping		
	Landscaping of the clear land for improving its aesthetic.	5.80%	60.38
E.	Plantation		
	Plantation over the cleared area obtained after dismantling and on other Barren Spaces.	10.00%	104.11
F.	Monitoring / Testing of parameters for three years.		
	Air Quality	3.83%	39.87
	Water Quality	3.34%	34.77

G.	Entrepreneurship development (Vocational / Skill Development) Training for sustainable income of affected people.	4.65%	48.41
H.	Miscellaneous and other mitigative measures.	11.60%	120.76
I.	Man power cost for supervision	9.30%	96.82
TOTAL		100%	1041.07

Note-

1. Upto 80% of the total deposited amount including interest accrued in the ECSROW account may be released after every 5 years. The amount released should be equal to expenditure incurred on Progressive Mine closure in past 5 years or 80% whichever is less.
2. The above cost/expenditure will be met from the corpus fund deposited in the escrow account by the mine operator. However, the additional amount (if needed) beyond the escrow account will be provided by the mine operator after estimating the final mine closure cost (as per the mine closure guideline).
3. The amount indicated separately under each head is indicative only and based on actual expenditure the amount may change.

6.5 Estimate of proposed escrow fund.

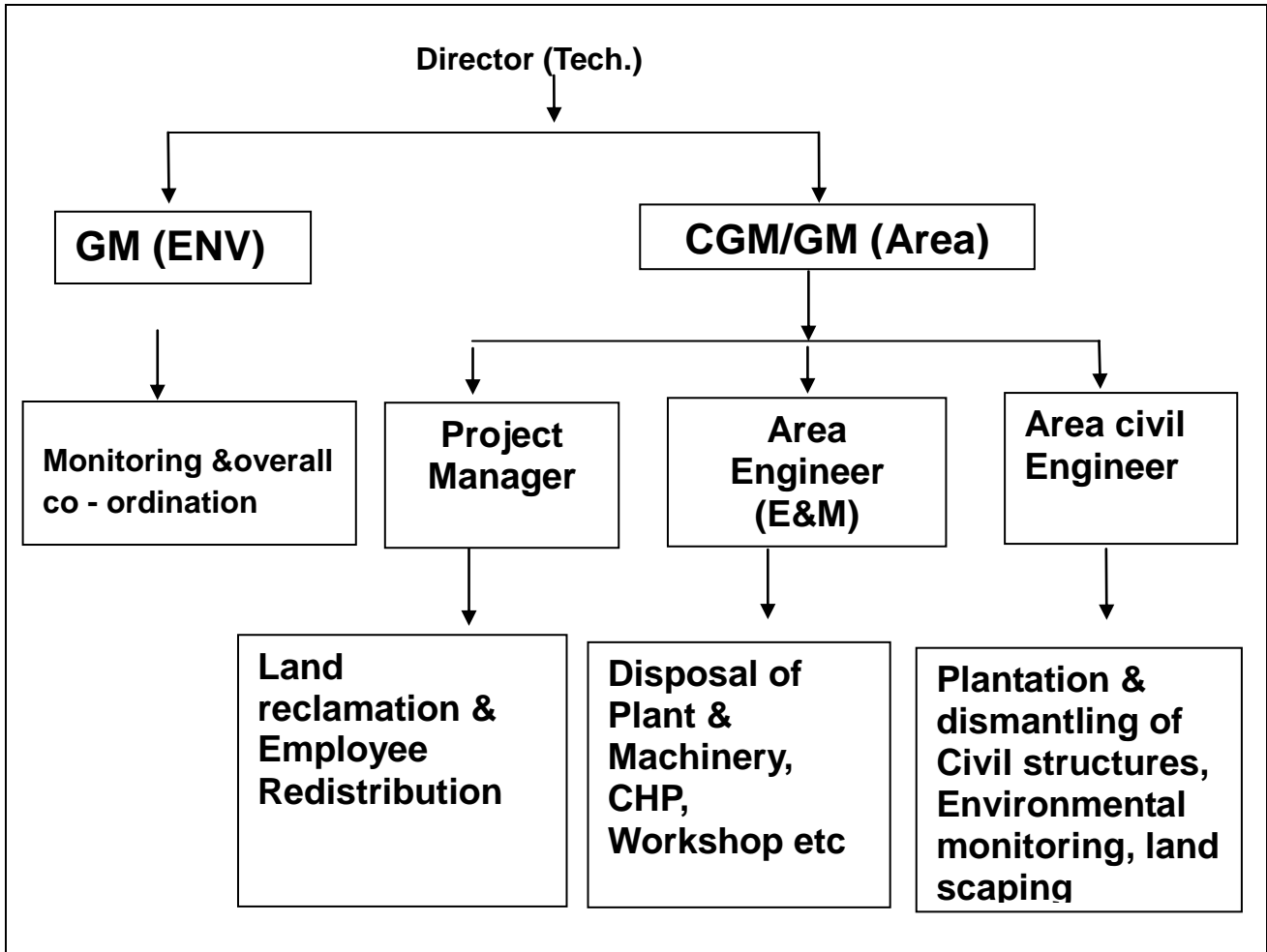
The total project area is 656.14 ha. So the corpus based on August, 2009 rate is 656.14 Lakhs @ 1.0 Lakh Rs/ha of project Area. The wholesale price Index in August, 2009 is 129.6 and the WPI, for the month of April 2012 available in the website of Office of Economic Adviser, Ministry of Commerce, Government of India is 163.5. So the current value of corpus is Rs. 656.14 *163.5/129.6 Lakhs, which comes to Rs. 827.76 lakhs. This corpus is to be divided by balance life of mine i.e. 10 years. So dividing by 10 years, the annual corpus comes to Rs 82.77 lakhs. This amount is to be deposited in escrow account every year with 5% escalation.

S.NO.	FINANCIAL YEAR	AMOUNTS IN LAKHS
1	2012-13	82.77
2	2013-14	86.91
3	2014-15	91.25
4	2015-16	95.82
5	2016-17	100.61
6	2017-18	105.64
7	2018-19	110.92
8	2019-20	116.47
9	2020-21	122.29
10	2021-22	128.40
	Total	1041.07

CHAPTER-7

IMPLIMENTATION PROTOCOL

For implementing the mine closure activities, the following organizational structure has been proposed:



Environmental monitoring for three years after closure of mine will be carried out to evaluate the environmental quality of the area. If need be, proper mitigative measures will be taken up after evaluating the environmental quality. The funds for this have been provided in the cost estimate. Before closure of the mine, Area GM will prepare survey and disposal report and the same will be submitted to DGMS for acceptance.
