



पर्यावरण विभाग

वेस्टर्न कोलफील्ड्स लिमिटेड

Western Coalfields Limited

(मिनिरतना कंपनी) (A Miniratna Company)

(कोल इंडिया लि० की अनुषंगी कंपनी)

(A Subsidiary of Coal India Limited)



Environment Department

क्षेत्रीय महाप्रबंधक कार्यालय, माजरी क्षेत्र

Office of the Area General Manager, Majri Area

Po: Kuchana; Th: Bhadrawati; Dist: Chandrapur - 442503

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संदर्भ संख्या/ Ref. No. वेकोलि/माक्षे/क्षेमप्र/पर्यावरण/2019/222

दिनांक/ Date: 23.11.2019

प्रति,

Regd.AD

Addl. Principal Chief Conservator of Forests,

पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय,

क्षेत्रीय कार्यालय (WCZ),

ग्राउंड फ्लोर, ईस्ट विंग, न्यू सेक्रेटरियट बिल्डिंग,

सिविल लाइंस, नागपुर-440001, (महाराष्ट्र)

विषय: Six Monthly Report against compliance of conditions of Environmental Clearance for Navin Kunada Opencast Coal Mine Expansion Project of Majri Area, WCL (As on 30th September 2019)

संदर्भ: Environment Clearance letter no.J-11015/315/2006-IA.II(M) Dt. 21.03.2007

महोदय,

Please find enclosed herewith Six Monthly Report against compliance of conditions of Environmental Clearance as referred above for Navin Kunada Opencast Coal Mine Expansion Project of Majri Area, WCL (As on 30th September 2019).

This is for your kind information and necessary action please.

धन्यवाद

भवदीय

क्षेत्रीय केंद्रस्थ अधिकारी (पर्यावरण),

माजरी क्षेत्र

संलग्नक : यथोपरी

प्रतिलिपि :

- प्रादेशिक अधिकारी, महाराष्ट्र प्रदूषण नियंत्रण बोर्ड, उद्योग भवन, प्रथम तल, रेल्वे स्टेशन रोड, चंद्रपुर - 442 401
- क्षेत्रीय महाप्रबंधक, माजरी क्षेत्र
- महाप्रबंधक (पर्यावरण), व० को० लि० मुख्यालय, नागपुर
- उप-क्षेत्रीय प्रबंधक, चारगाव तेलवासा उपक्षेत्र



WESTERN COALFIELDS LIMITED

MAJRI AREA

**NAVIN KUNADA OPENCAST
COAL MINE EXPANSION PROJECT**

**SIX MONTHLY
EC COMPLIANCE REPORT**

AS ON 30th September 2019

WEESTERN COALFIELDS LIMITED
SIX MONTHLY ENVIRONMENTAL MONITORING REPORT

PART-I

Name of the project	NAVIN KUNADA OPEN CAST COAL MINE EXPANSION PROJECT
Location and Address	Office of the Sub Area Manager, Navin Kunada Open Cast Coal Mine Expansion Project, Chargaon Sub Area, Majri Area. PO: Konda via Shivjinagar Ta: Bhadrawati, Dist: Chandrapur. Maharashtra- 442503
Address for correspondence	Office of the Sub Area Manager, Navin Kunada Open Cast Coal Mine Expansion Project, Chargaon Sub Area, Majri Area. PO: Konda via Shivjinagar Ta: Bhadrawati, Dist: Chandrapur. Maharashtra- 442503
MOEF's clearance letter no. & date	J-11015/315/2006-IA.II(M) Dated 21st March 2007
Period of this status report	As on 30 th September 2019
Date of last report submitted	28.05.2019
Date of commencement of project work	January' 2001 (Mine closed as coal reserves exhausted)

STATUS OF LAND ACQUISITION:

Type of land	Required as per EMP (Ha)	Actual acquired (Ha) as on 30.09.2019
Forest	Nil	Nil
Agriculture	258.45	208.13
Other	Nil	Nil
Total	258.45	208.13*

*18.0 Ha is already under possession in adjacent project NMOC-II(A) & 32.32 Ha in Chargaon OCP.

STATUS OF LEGAL COMPLIANCES:

a.	Consent under Water (Prevention & Control of Pollution) Act:	MINE DISCONTINUED
b.	Consent under Air (Prevention & Control of Pollution) Act	Consent to Operate granted for mine closure activities vide letter no. BO/JD(APC)/TB-2UAN no. 28004/ R/CC-1902000495 dtd 12.02.19
c.	Environment (Protection) Act	Env. Statement submitted to MPCB for the year 2018-19. Env. Clearance obtained for 2.00 MTY.
d.	Forest (Conservation) Act	Not applicable.

PART – II

STATUS OF ENVIRONMENT

AIR POLLUTION CONTROL:-

- a. No. of ambient air monitoring stations: Four.
- b. Name of the location:
1. Sub station
 2. Chargaon SAM Office
 3. Deulwada village
 4. Ekta Nagar Colony
- c. Ambient air quality status for the parameters prescribed by State Pollution Control Board (Average 95% time weighted values):

Sl.No	Location	SPM	RPM	SO ₂	NO _x
1.	Sub station	Enclosed CMPDIL monitoring reports for the period from April to August 2019.			
2.	Chargaon SAM Office				
3.	Deulwada village				
4.	Ekta Nagar Colony				

WATER POLLUTION CONTROL:

- a. No. of stations and frequency of monitoring: There is no mine discharge at present.
- b. Description of locations:
Not applicable.
- c. Average concentration of major pollutants prescribed by State Pollution Control Board (fig. in mg/lit except pH) :

Sl. No	Location	pH	BOD	COD	DO	TSS	O/G
		Not applicable as mine is closed and there is no mine discharge from mine					

Each source in Cubic Meter per Day: From mine – Nil

NOISE POLLUTION CONTROL:

- a. No. of noise monitoring stations:- Two.
- b. Description of location and dB(A) value:-
1. Near Project Office.
 2. Ekta Nagar Colony

Sl.No	Location	Day - dB(A)	Night -dB(A)
1.	Near Project Office	Enclosed CMPDIL monitoring reports for the period from April to August 2019.	
2.	Ekta Nagar Colony		

PART-III

STATUS OF IMPLEMENTATION OF PROVISIONS OF EMP

LAND USE STATUS :-

Area reclaimed biologically: Nil.
(Tree plantation on backfilled area)

Sl. No.	Particulars	As per EMP	01.04.2019 to 30.09.2019	Progressive
1.	Area excavated (Ha)	97.60	Nil	97.60
2.	OB removed (Mm3)	53.47	Nil	51.502
3.	Top soil removed (Mm3)	Not available	Nil	2.442
4.	OB backfilled (Mm3)	38.527	Nil	36.981
5.	OB dumped (Mm3)	14.943	Nil	15.575
6.	Area recovered for reclamation (physical reclamation) (Ha)	Not available	Nil	Nil

PRODUCTION :-

- (i) Targeted Capacity: - 2.00 MTY
- (ii) Present Capacity: - 0.00 MTY (2018-19)

AFFORESTRATION :-

Sl. No	Location	01.04.2019 to 30.09.2019	Progressive (Nos.)
1.	OB Dump & embankments	Nil	63,750
2.	Safety zones	Nil	Nil
3.	Backfilled areas	Nil	Nil
4.	Other areas	Nil	20,000
	Total	Nil	83,750

Area under plantation (Progressive): - 33.50 Ha.

No. of plants per Hectare :- 2500 plants per Ha.

Species planted: - Karanj, Kini, Sirus, Arjun, Gulmohar, Peltophorum, Teak, Sishoo, Nilgiri, Shivan, Amla, Rain Tree, Kadam etc.

REHABILITATION & RESETTLEMENT :-

Rehabilitation & Resettlement is being done as per CIL R&R Policy.

Sl.No	Particulars	SC	ST	Others	Total
1.	No. of land oustees	07	---	151	158
2.	No. of land oustees rehabilitated	05	---	84	89
3.	No. of PAPS/PAFS to be resettled	09	17	162	188
4.	No. of PAPS/PAFS resettled	188			
5.	Area of new site (Ha)	13.56			
6.	Status of development	Development works completed.			
7.	Civic amenities provided at new resettlement site	All civic amenities are provided at new resettlement site.			

Organizational setup at project level:-

(Name and designation of the personnel to be given)

1. Shri S. K. Bairva,
Sub Area Manager.
2. Shri S. K. Bairva,
Sr. Manager (Mining)
3. Shri Mirza Shakil Baig,
SOE(Civil).

EXPENDITURE:-CAPITAL

Account head	01.04.2019 to 30.09.2019	Progressive
Reclamation (HEMM)	Nil	Rs. 294.00 lakhs
Air pollution control	Nil	Rs. 39.08 lakhs
Water pollution control	Nil	Rs. 7.95 lakhs
Others	Nil	Nil

REVENUE

Account head	01.04.2019 to 30.09.2019	Progressive
Afforestation	Nil	Rs. 54.03 lakhs
Monitoring	Rs. 3.19 lakhs	Rs. 46.51 lakhs
Statutory expenses	Nil	Rs. 33.81 lakhs
Others (Cost of operation & maintenance of mobile tankers, fixed sprinklers etc.)	Nil	Rs. 266.40 lakhs

PART- IV

Project : *Navin Kunada Opencast Coal Mine Expansion Project.*

Clearance letter No. : *J-11015/315/2006-IA.II (M)*

Date : *21st March 2007*

1. SPECIFIC CONDITIONS					
Sl.No	Conditions	Compliance			
i.	Mining shall be carried out as per statuette at a safe distance from the Wardha river flowing adjacent to the lease boundary.	<i>Mining discontinued and The quarry edge is about 1200 m away from the left bank of Wardha River.</i>			
ii.	The embankment constructed along the river shall be of suitable dimensions and stabilized with plantation so as to withstand the peak water flow and prevent mine inundation.	<i>The embankment is 30 m at top, 50 m at bottom. The Top RL is 198 m i.e. 6.0 m above HFL (192.0 m). Plantation done over embankment so far is 15,000 nos.</i>			
iii.	Top soil should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt.	<i>Top soil has been stacked at earmarked site covering 6.95 Ha & shall be used for carpeting over backfilled area for plantation.</i>			
iv.	OB should be stacked at earmarked external dumpsite within ML area and shall be a maximum height of 60 m only and consist of four benches of 15 m each. The ultimate slope of the dump shall not exceed 28 degree. Monitoring and management of reclaimed dumpsite should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to Ministry of Environment & Forest and its regional Office located at Bhopal on yearly basis.	<i>OB is being stacked at earmarked sites at four places. The details are as follows:-</i>			
		S. N.	Dump	Area	Height
		1.	D1- External OB Dump	56 Ha	35 m
		2.	D2- Backfilled Dump NKOC	46 Ha	7 m (from GL)
		3.	D3- Backfilled Dump Sirna OC	40 Ha	35 m (from GL)
4.	ND1-External OB Dump NKOC	10 Ha	10 m		
v.	Catch drain and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drain should be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provided adequate retention period to allow proper settling of silt material.	<i>Catch drains around OB dumps has been made. Drains are de-silted before onset of every monsoon. Cross drainage provided on OB & coal benches guiding entire seepage water to the sump provided at the floor of the seam of size (i) 300 x 20 x 5 m (ii) 140 x 20 x 5 m. The sump capacity is sufficient to allow adequate retention time for proper settling of suspended particles. Garland drains has also been provided around the mine and de-silted before onset of monsoon.</i>			
vi.	Dimension of the retaining wall at the toe of dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.	<i>Since silt & sediments are naturally drained to the sedimentation pond made out of mine de-coaled area, therefore, construction of retaining wall at the toe of OB dumps & benches is not required. The same is subsequently diverted to the surface sedimentation tank.</i>			


vii.	Additional sedimentation tank shall be constructed to handle the additional mine discharge, particularly during rainy season.	Additional sedimentation tank has been constructed to handle additional discharge.
viii.	Drills should be wet operated only. Wet drilling shall be adopted within one year even in the existing mine.	Since there is no Coal reserve in the mine, mine is closed.
ix.	Controlled blasting should be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.	Since there is no Coal reserve in the mine, mine is closed.
x.	High efficiency bag filters/water sprinkling system should be provided to check fugitive emissions from CHP, crushing operations, conveyor system, haulage roads, transfer points, etc.	Since there is no Coal reserve in the mine, CHP (crushing operations, conveyor system, haulage roads, transfer points, etc) are no in operation as mine is closed
xi.	Black topping of coal transportation road shall be done.	Black topping of coal transport road for approx. 3.60 km length has been done.
xii.	Fixed sprinklers shall be provided at the new and old coal stock yard.	Since there is no Coal reserve in the mine, mine is closed.
xiii.	An area not less than 149 ha shall be brought under Afforestation which includes reclaimed external OB dump (67 ha), backfilled area (45 ha), along ML boundary, along roads and infrastructure (2 ha), green belt, embankment (13.05 ha), vacant land (14 ha) and area in township located outside the lease by planting native species in consultation with the local DFO/ Agriculture department. The density of the trees should be around 2500 plants per ha.	<p>Details of tree plantation done till date are as follows:-</p> <ol style="list-style-type: none"> 1. Reclaimed external OB dump – 4.0 2. Backfilled area – Nil 3. Along ML boundary – Nil 4. Along roads & infrastructure - Nil 5. Green belt - Nil 6. Embankment – 21.5 Ha 7. Vacant land – 8.0 Ha 8. Area in township located outside the lease – Nil <p>The plantation is being carried out by FDCM Ltd & Madhya Pradesh Rajya Van Vikas Nigam Ltd., both State Govt. undertaking under the supervision of forest experts.</p>
xiv.	A Progressive Mine Closure Plan shall be implemented by reclamation of quarry area of which 45 ha shall be backfilled and afforested by planting native plant species in consultation with local DFO/Agriculture Department. The density of the trees should be around 2500 plants per Ha. The balance 52.60 ha of de-coaled void, which is being converted into water reservoir, shall be gently sloped along the upper benches, terraced and reclaimed with plantation. The outer periphery of the water body shall be fenced.	As on 31.03.2019, an amount of Rs 28,07,44,754.00 has been deposited in Escrow account (A/c no. 08973161007671 (New)). Progressive Mine closure claim of Rs 17.76 crores for the period 2011-12 to 2015-16 is reimbursed. Balance as on 31.03.2019 is Rs 11, 91,32,100.00/-.

xv.	Regular monitoring of ground water 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 the Central Pollution Control Board quarterly within one month of monitoring.	Well water monitoring for assessing the ground water level in the villages of buffer zone is being carried out through CMPDIL. Report of the same has been submitted to your good office vide our letter no. WCL/MA/AGM/ENV/2019/140 dated 21.07.2019 and e.mail dated 27.07.2019
xvi.	The company shall put up artificial groundwater recharge measures for augmentation of groundwater resources. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to de-watering of the mine.	Arrangement has been made for artificial ground water recharge measures & adopted rain water harvesting for various infrastructure, buildings. The project will provide drinking water to the nearby villages in case of village wells go dried due to dewatering of the mine. At present there is no such case.
xvii.	ETP should also be provided for workshop and CHP waste water.	Mine is closed as the reserves are exhausted
xviii.	The company shall obtain approval of CGWA/CGWB Regional Office for use of groundwater for mining operations.	No ground water is being used for mining operation.
xix.	Digital processing of the entire lease area using remote sensing technique should be done regularly once in 3 years for monitoring land use pattern & report submitted to Ministry of Environment & Forests & its Regional Office at Bhopal.	Complied. Land use pattern monitoring of Navin Kunada OC Mine has been done in year 2018 and report of same is uploaded on WCL Website.
xx.	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 & hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of two year & the results reported to this Ministry & to DGMS.	Noted for Compliance
xxi.	R & R of village Navin Kunada shall be completed within the specified time schedule and shall be not less than that of the National R & R Policy.	Compliance already submitted along with last report
xxii.	Consent to operate shall be obtained before expansion in production.	Consent to Operate granted upto 31.03.2020 for mine closure activities.
2.	GENERAL CONDITIONS	
Sl.No	Condition	Compliance
i.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	Noted.
ii.	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	Noted.

iii.	Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO ₂ , 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.	The ambient air quality monitoring at present is being carried out at four stations in core and buffer zone which are as follows:-1. Chargaon SAM Office, 2.Sub Station, 3. Ekta Nagar Colony, 4. Deulwada village. The monitoring report for April to August 2019 enclosed herewith.
iv.	Fugitive dust emissions (SPM & RPM) from all the sources should be controlled, regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading & unloading) points should be provided and properly maintained.	Since, the mine is closed, there is no fugitive emission from mine due to mining activity (coal transportation roads, coal stock yard etc.)
v.	Data on ambient air quality (SPM, RPM, SO ₂ , NO _x) should be regularly submitted to the Ministry including its Regional Office at Bhopal and to the State Pollution Control Board & the Central Pollution Control Board once in six months.	Reports on ambient air quality are being submitted to MPCB Chandrapur quarterly. The same is also submitted to MOEF, Regional Office, Nagpur along with Six monthly report. The same for April to August 2019 is enclosed herewith for ready reference.
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.	Mine is closed and there is no such activity going on which leads to heavy work place noise atmosphere. However, if the workers engaged in noisy environment are provided with ear plugs/muffs. Two nos. stations are there for monitoring the noise level data namely i. Near project Office, ii. Ekta Nagar Colony.
vii.	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.	Since, mine is closed hence there is no industrial waste water (workshop and waste water from the mine) generated from the mine.
viii.	Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins & optimally loaded.	All the light vehicles namely Jeep & trucks etc. are having valid PUC certificate for vehicular emission through RTO approved agency. Further, it may be mentioned here that the ambient air quality monitoring in and around the mine site is regularly carried out. Vehicles used for transportation of coal are covered with tarpaulin & optimally loaded as per the carrying capacity.
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.	A full-fledged environmental laboratory under CMPDIL exists at Nagpur, which monitors all the mines of WCL including this mine.

x.	Personnel working in dusty areas 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.	Personnel working in dusty areas are provided with dust masks. The workers are given training/ refresher training in VTC on safety and health aspects which is also a statutory requirement under Mines Act 1952. Periodic medical Examination for all workers once in every five years is carried out and records maintained to observe any disease and to take corrective measures, if needed.
xi.	A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the head of the company.	Environment Cell exists at HQ, Area, & project level. GM (Environment) of HQ directly reports to the head of the Organization.
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.	Funds have been earmarked for environment protection measures and is kept in separate account and is not diverted for other purpose. Expenditure incurred on environment measures has been given in the enclosed Part -III document.
xiii.	The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data/ information /monitoring reports.	Noted.
xiv.	A copy of clearance letter will be marked to concerned Panchayat/ Local NGO if any, from whom any suggestions/representation has been received while processing the proposal.	Copy of clearance letter has already been sent to Gram Panchayat vide our letter no. WCL/MA/SAM/COCSA/ 2007/26 dated 13.06.2007 & WCL/MA/ CGM/ENV/ 2007-08/141 dated 17.08. 2007.
xv.	State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Center and Collector's Office/ Tahasildar's Office for 30 days.	Clearance letter sent to MPCB for display vide our letter no. WCL/MA/CGM/ENV/ 2007-08/140 dated 17.08. 2007.
xvi.	The project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at web site of the Ministry of Environment & Forests at http://envfor.nic.in .	Complied. Advertisement given in following 2 Newspapers:- 1. The Hitwada (English), Nagpur dated 18.04.2007 2. Mahavidarbha (Marathi), Chandrapur dated 19.04.2007 Copies of the advertisements already submitted alongwith last report.
3	The ministry or any other competent authority may stipulate any further condition for environmental protection.	Noted.

4	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.	Noted.
5	The above conditions will be enforced <i>inter alia</i> , 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.	Noted.


 Sub Area Manager
 Navin Kunada Opencast Coal Mine
 Expansion Project.
 Majri Area, WCL

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ENVIRONMENTAL MONITORING REPORT

NAVIN KUNADA EXPN. OC
(MAJRI AREA)

WESTERN COALFIELDS LTD.

(JOB No. 8000002)



APRIL-2019

Environment Laboratory
NABL Accredited vide Cert. No. TC-7102

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440014

AN ISO 9001:2015 COMPANY

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INTRODUCTION

Location :

Navin Kunada OC is located in Chandrapur district of Maharashtra state. The project is administered by Majri Area of Western Coalfields Limited.

Communication :

Navin Kunada OC Project is well connected by both rail & road communications. The nearest railway station is Bandak on Nagpur - Chandrapur sector of Central Railway main line.

Drainage :

The Wardha River is the main drainage channel for the surrounding area.

Climate :

The climate of the area is tropical. May is the hottest month with temperature rising to a maximum of 48°C. December is the coldest month when the temperature falls down to 10°C.

Other Sources of Pollution :

Transportation roads, agricultural and local activities ,vehicular traffic etc also contributes to the pollution.

Sampling Locations :

Ambient Air Quality Monitoring locations :

<u>S.No.</u>	<u>Location Details</u>	<u>Location Code</u>
1.	Chargaon Intake well Near	MNOA-1
2.	Ekta Nagar colony	MNOA-2
3.	Near Deulwada village	MNOA-3
4.	Chargaon SAM Office	MNOA-4

Water Quality Monitoring location :

<u>S.No.</u>	<u>Location Details</u>	<u>Location Code</u>
1.	Mine water discharge	MNOW-1

Noise Level Monitoring location :

<u>S.No.</u>	<u>Location Details</u>	<u>Location Code</u>
1.	Near Project Office/CHP	MNON-1
2.	Ekta Nagar Colony	MNON-2

Frequency of Monitoring :

- Air** : Frequency of monitoring is as per the Env. (Protection) Amendment Rules published vide Gazette dt. 25.9.2000.
- Water** : Water quality is monitored on fortnightly basis.
- Noise** : Noise level is monitored on fortnightly basis.

Methodology of Sampling and Analysis :

- Air** : 24 hourly air samples are collected with Respirable Dust Sampler at selected locations to monitor ambient air quality w.r.t. Suspended particulate matter (TPM), Respirable Particulate Matter (PM-10), Sulphur di-oxide (SO₂) and Oxides of nitrogen (NO_x) etc.
- SPM** : Ambient air laden with suspended particulates enters the Respirable Dust Sampler through the inlet pipe of sampler by means of a high flow rate blower. As the air

passes through the cyclone, coarse, non-respirable dust (size $>10 \mu$) is separated from the air stream by centrifugal forces acting on the solid particles. These separated particles fall through the cyclone's conical hopper and collect in the sampling bottle placed at bottom. The fine dust forming the respirable fraction (size $<10 \mu$) of the Total Suspended Particulates passes through the cyclone and is carried by the air stream to the Glass Micro Fibre Filter Paper. The Respirable dust (PM-10) is retained by the filter and the carrier air exhausted from the system through the blower. The mass concentration ($\mu\text{g}/\text{m}^3$) of Suspended Particulate Matter (non-respirable dust and respirable dust) and Respirable Particulate Matter in the ambient air is computed by measuring the mass of collected particulates and the volume of air sampled.

PM-2.5 : Ambient air enters the Fine dust sampler through an omni-directional air inlet designed to provide a clear aerodynamic cut point for particles greater than 10 microns. Particles in the air stream finer than 10 microns proceed to a second impactor that has an aerodynamic cut point at 2.5 microns. The air sample and fine particulates exiting from the PM 2.5 impactor are passed through a 47 mm diameter Teflon filter membrane that retains the PM-2.5. The mass concentrations ($\mu\text{g}/\text{m}^3$) of PM-2.5 in the ambient air are computed by measuring the mass of collected particulates and the volume of air sampled.


NO_x : Determination of oxides of Nitrogen is based on the procedure of "Jacobs and Hochheiser method". In this method the air sample is collected 24 hourly in the field and analysed in the laboratory using spectronic 20 D+ Spectrophotometer. Nitrogen oxides as Nitrogen di-oxide are collected by bubbling air through a Sodium hydroxide solution to form a stable solution of Sodium nitrite. The nitrite ion produced during sampling is determined colorimetrically (with the help of Spectrophotometer, measuring absorbance at 540 nm) by reacting the exposed absorbing reagent with Phosphoric acid, Sulphanilamide and N(1-naphthyl) ethylenediamine dihydrochloride. The interference of Sulphur di-oxide is eliminated by converting it to Sulphuric acid with Hydrogen peroxide before analysis.

SO₂ : Determination of SO₂ is based on the procedure of West and Gaeke method. Sulphur di-oxide from the air stream is absorbed in a Sodium tetrachloromercurate solution to form a stable solution of Dichlorosulphitomercurate. The amount of Sulphur dioxide is then estimated by the colour produced when P-Rosaniline hydrochloride is added to the solution. The colour is estimated by a reading of absorbance at 560 nm in the Spectrophotometer.

Water : Mine water discharge is collected on fortnightly basis in plastic zaricane and is transported to the laboratory for analysis. As per the Env. (Protection) Amendment Rules published vide Gazette dt. 25.9.2000, water samples are analysed fortnightly for the parameters - pH, TSS, Oil & Grease and COD and once in a year for all parameters as per Schedule VI, Env. Protection rule.

Due to non-availability, mine water discharge could not be monitored during this month.

Noise : Noise level data are recorded fortnightly.

Environment Laboratory CMPDI, RI IV, Nagpur	Test Report	 TC - 7102
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Test Report NO : RIN/TR/APRIL-19/W-53 Date of Issue : 15/06/2019
 Name of the Customer: WCL, Nagpur
 Customer letter Ref. No. : WCL/HQ/ENV/17-K/520-
 522 DATED-18.04.19 Sample Description : Air sample
 No. of pages : 2

Test Required : IS-5182 [PM-10(04:1999), NO_x(06:2006), SO₂(02:2001)], PM-2.5 & SPM*.

AIR QUALITY MONITORING DATA

NAME OF THE COMPANY : WCL YEAR : 2019
 NAME OF THE AREA : MAJRI MONTH : APRIL
 NAME OF THE PROJECT : NAVIN-KUNADA OCP

Chargaon Intake well					
DATE OF SAMPLING	Parameters (24 hourly values in µg/m3)				
	SPM*	PM-10	PM-2.5	NO _x	SO _x
25/04/2019	80	70	30	11	8
TLV as per Env.(Protection) Amendment Rule 2000	600	300	60	120	120
Ekta Nagar colony					
DATE OF SAMPLING	Parameters (24 hourly values in µg/m3)				
	SPM*	PM-10	PM-2.5	NO _x	SO _x
24/04/2019	195	85	30	22	16
Permissible Limits	200	100	60	80	80
Near Deulwada village					
DATE OF SAMPLING	Parameters (24 hourly values in µg/m3)				
	SPM*	PM-10	PM-2.5	NO _x	SO _x
24/04/2019	271	85	16	13	9
Permissible Limits	200	100	60	80	80

#-Above Std Value.

SAM Office Chargaon					
DATE OF SAMPLING	Parameters (24 hourly values in µg/m3)				
	SPM*	PM-10	PM-2.5	NOx	SOx
25/04/2019	168	89	49	14	10
Permissible Limits	600	300	600	120	120

#-Above Std Value.

(Scientific Assistant)

Deepanshu Sahu
(Authorized Signatory)

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- Note: 1) This Report refers to the values related to the items tested as received.
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3) * - Test parameter not under NABL scope.
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NOISE LEVEL DATA

NAME OF THE COMPANY : WCL YEAR : 2019
NAME OF THE AREA : MAJRI MONTH : APRIL
NAME OF THE PROJECT : NAVIN-KUNADA OCP

Name of the Location : Chargaon CHP - MNON-1

Month	Date of Data collection	Noise Level in dB(A)
		Day Time
APRIL.2019	23/04/2019	53.7
Noise Level Standard as per Env. (Protection) Amendment rule 2000		75

Name of the Location : Ekta Nagar Colony- MNON-2

Month	Date of Data collection	Noise Level in dB(A)
		Day Time
APRIL.2019	25/04/2019	43.3
Noise Level Standard as per Env. (Protection) Amendment rule 2000		55

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ENVIRONMENTAL MONITORING REPORT

NAVIN KUNADA EXPN. OC
(MAJRI AREA)

WESTERN COALFIELDS LTD.

(JOB No. 8000002)



MAY-2019

Environment Laboratory
NABL Accredited vide Cert. No. TC-7102

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440014

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2.	AIR QUALITY MONITORING DATA	3-4
3.	NOISE LEVEL DATA	5

INTRODUCTION

Location :

Navin Kunada OC is located in Chandrapur district of Maharashtra state. The project is administered by Majri Area of Western Coalfields Limited.

Communication :

Navin Kunada OC Project is well connected by both rail & road communications. The nearest railway station is Bandak on Nagpur - Chandrapur sector of Central Railway main line.

Drainage :

The Wardha River is the main drainage channel for the surrounding area.

Climate :

The climate of the area is tropical. May is the hottest month with temperature rising to a maximum of 48°C. December is the coldest month when the temperature falls down to 10°C.

Other Sources of Pollution :

Transportation roads, agricultural and local activities ,vehicular traffic etc also contributes to the pollution.

Sampling Locations :

Ambient Air Quality Monitoring locations :

<u>S.No.</u>	<u>Location Details</u>	<u>Location Code</u>
1.	Chargaon Intake well Near	MNOA-1
2.	Ekta Nagar colony	MNOA-2
3.	Near Deulwada village	MNOA-3
4.	Chargaon SAM Office	MNOA-4

Water Quality Monitoring location :

<u>S.No.</u>	<u>Location Details</u>	<u>Location Code</u>
1.	Mine water discharge	MNOW-1

Noise Level Monitoring location :

<u>S.No.</u>	<u>Location Details</u>	<u>Location Code</u>
1.	Near Project Office/CHP	MNON-1
2.	Ekta Nagar Colony	MNON-2

Frequency of Monitoring :

Air : Frequency of monitoring is fortnightly as per the Env. (Protection) Amendment Rules published vide Gazette dt. 25.9.2000.

Water : Water quality is monitored on fortnightly basis.

Noise : Noise level is monitored on fortnightly basis.

Methodology of Sampling and Analysis :

Air : 24 hourly air samples are collected with Respirable Dust Sampler at selected locations to monitor ambient air quality w.r.t. Suspended particulate matter (SPM), Respirable Particulate Matter (PM-10), Sulphur di-oxide (SO₂) and Oxides of nitrogen (NO_x) etc.

SPM/ PM-10 : Ambient air laden with suspended particulates enters the Respirable Dust Sampler through the inlet pipe of sampler by means of a high flow rate blower (1.1 to 1.5 m³/min.). As the air passes through the cyclone, coarse, non-respirable dust

(size > 10 μ) is separated from the air stream by centrifugal forces acting on the solid particles. These separated particles fall through the cyclone's conical hopper and collect in the sampling bottle placed at bottom. The fine dust forming the respirable fraction (size < 10 μ) of the Total Suspended Particulates passes through the cyclone and is carried by the air stream to the Glass Micro Fiber Filter Paper. The Respirable dust (PM-10) is retained by the filter and the carrier air exhausted from the system through the blower. The mass concentration ($\mu\text{g}/\text{m}^3$) of Suspended Particulate Matter (non-respirable dust and respirable dust) and Respirable Particulate Matter (PM-10) in the ambient air are computed by measuring the mass of collected particulates and the volume of air sampled.

PM2.5 : Ambient air enters the Fine dust sampler through an omni-directional air inlet designed to provide a clear aerodynamic cut point for particles greater than 10 microns. Particles in the air stream finer than 10 microns proceed to a second impactor that has an aerodynamic cut point at 2.5 microns. The air sample and fine particulates exiting from the PM 2.5 impactor are passed through a 47 mm diameter Teflon filter membrane that retains the PM-2.5. The mass concentrations ($\mu\text{g}/\text{m}^3$) of PM-2.5 in the ambient air are computed by measuring the mass of collected particulates and the volume of air sampled.


Heavy Metals : Heavy Metals in Air Samples like Arsenic (As), Lead (Pb), Nickel (Ni), Chromium (Cr) and Cadmium (Cd) are analysed twice a year as per CPCB's guidelines after digestion of samples in microwave digester, with the help of Atomic Absorption Spectrophotometer (AAS) with Hydride generation system and Graphite furnace.

NO_x : Determination of oxides of Nitrogen is based on the procedure of "Jacobs and Hochheiser method". In this method the air sample is collected 24 hourly in the field and analysed in the laboratory using spectronic 20 D+ Spectrophotometer. Nitrogen oxides as Nitrogen di-oxide are collected by bubbling air through a Sodium hydroxide solution to form a stable solution of Sodium nitrite. The nitrite ion produced during sampling is determined colorimetrically (with the help of Spectrophotometer, measuring absorbance at 540 nm) by reacting the exposed absorbing reagent with Phosphoric acid, Sulphanilamide and N(1-naphthyl) ethylenediamine dihydrochloride. The interference of Sulphur di-oxide is eliminated by converting it to Sulphuric acid with Hydrogen peroxide before analysis.

SO₂ : Determination of SO₂ is based on the procedure of West and Gaeke method. Sulphur di-oxide from the air stream is absorbed in a Sodium tetrachloromercurate solution to form a stable solution of Dichlorosulphitomercurate. The amount of Sulphur dioxide is then estimated by the colour produced when P-Rosaniline hydrochloride is added to the solution. The colour is estimated by a reading of absorbance at 560 nm in the Spectrophotometer.

Water : Mine water discharge is collected on fortnightly basis in plastic zaricane and is transported to the laboratory for analysis. As per the Env. (Protection) Amendment Rules published vide Gazette dt. 25.9.2000, water samples are analysed fortnightly for the parameters - pH, TSS, Oil & Grease and COD and once in a year for all parameters as per Schedule VI, Env. Protection rule.

Noise : Noise level data are recorded fortnightly.

Environment Laboratory CMPDI, RI IV, Nagpur	Test Report	 TC - 7102
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TEST REPORT NO. : RIN/TR/MAY-19/A-53 DATE OF ISSUE: 10.07.19
 NAME OF CUSTOMER: WCL, NAGPUR SAMPLE DESCRIPTION: AIR SAMPLE
 CUSTOMER LETTER REF. NO. : WCL/HQ/ENV/17-K/520-522 DATED-18.04.19
 NO. OF PAGES: 2
 TEST REQUIRED: IS-5182 [PM-10(04:1999), NOx (06:2006), SO2 (02:2001)], SPM*, PM-2.5 (USEPA METHOD)

AIR QUALITY MONITORING DATA

NAME OF THE COMPANY : WCL YEAR : 2019
 NAME OF THE AREA : MAJRI MONTH : MAY
 NAME OF THE PROJECT : NAVIN-KUNADA OCP

Chargaon Intake well					
DATE OF SAMPLING	Parameters (24 hourly values in µg/m3)				
	SPM*	PM-10	PM-2.5	NOx	SOx
11/05/19	110	94	47	23	15
27/05/19	217	116	37	21	14
TLV as per Env.(Protection) Amendment Rule 2000	600	300	60	120	120
Ekta Nagar colony					
DATE OF SAMPLING	Parameters (24 hourly values in µg/m3)				
	SPM*	PM-10	PM-2.5	NOx	SOx
10/05/19	101	75	40	23	12
24/05/19	171	69	44	24	18
Permissible Limits	200	100	60	80	80
Near Deulwada village					
DATE OF SAMPLING	Parameters (24 hourly values in µg/m3)				
	SPM*	PM-10	PM-2.5	NOx	SOx
10/05/19	134	51	26	22	12
24/05/19	105	43	16	20	11
Permissible Limits	200	100	60	80	80

#-Above Std Value.

SAM Office Chargaon					
DATE OF SAMPLING	Parameters (24 hourly values in µg/m3)				
	SPM*	PM-10	PM-2.5	NOx	SOx
11/05/19	223	100	18	22	12
27/05/19	208	54	11	23	16
Permissible Limits	600	300	600	120	120

#-Above Std Value.

(Scientific Assistant)

Deepanshu Sahu
(Authorized Signatory)

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- Note: 1) This Report refers to the values related to the items tested as received.
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3) * - Test parameter not under NABL scope.
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NOISE LEVEL DATA

NAME OF THE COMPANY : WCL YEAR : 2019
NAME OF THE AREA : MAJRI MONTH : MAY
NAME OF THE PROJECT : NAVIN-KUNADA OCP

Name of the Location : Chargaon CHP - MNON-1

Month	Date of Data collection	Noise Level in dB(A)
		Day Time
MAY.2019	09/05/2019	52.0
MAY.2019	26/05/2019	53.2
Noise Level Standard as per Env. (Protection) Amendment rule 2000		75

Name of the Location : Ekta Nagar Colony- MNON-2

Month	Date of Data collection	Noise Level in dB(A)
		Day Time
MAY.2019	11/05/2019	42.5
May.2019	25/05/2019	43.2
Noise Level Standard as per Env. (Protection) Amendment rule 2000		55

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ENVIRONMENTAL MONITORING REPORT

NAVIN KUNADA EXPN. OC

(MAJRI AREA)

WESTERN COALFIELDS LTD.

(JOB No. 8000002)



JUNE-2019

Environment Laboratory
NABL Accredited vide Cert. No. TC-7102

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3.	NOISE LEVEL DATA	5

INTRODUCTION

Location :

Navin Kunada OC is located in Chandrapur district of Maharashtra state. The project is administered by Majri Area of Western Coalfields Limited.

Communication :

Navin Kunada OC Project is well connected by both rail & road communications. The nearest railway station is Bandak on Nagpur - Chandrapur sector of Central Railway main line.

Drainage :

The Wardha River is the main drainage channel for the surrounding area.

Climate :

The climate of the area is tropical. JUNE is the hottest month with temperature rising to a maximum of 48°C. December is the coldest month when the temperature falls down to 10°C.

Other Sources of Pollution :

Transportation roads, agricultural and local activities ,vehicular traffic etc also contributes to the pollution.

Sampling Locations :

Ambient Air Quality Monitoring locations :

<u>S.No.</u>	<u>Location Details</u>	<u>Location Code</u>
1.	Chargaon Intake well Near	MNOA-1
2.	Ekta Nagar colony	MNOA-2
3.	Near Deulwada village	MNOA-3
4.	Chargaon SAM Office	MNOA-4

Water Quality Monitoring location :

<u>S.No.</u>	<u>Location Details</u>	<u>Location Code</u>
1.	Mine water discharge	MNOW-1

Noise Level Monitoring location :

<u>S.No.</u>	<u>Location Details</u>	<u>Location Code</u>
1.	Near Project Office/CHP	MNON-1
2.	Ekta Nagar Colony	MNON-2

Frequency of Monitoring :

Air : Frequency of monitoring is fortnightly as per the Env. (Protection) Amendment Rules published vide Gazette dt. 25.9.2000.

Water : Water quality is monitored on fortnightly basis.

Noise : Noise level is monitored on fortnightly basis.

Methodology of Sampling and Analysis :

Air : 24 hourly air samples are collected with Respirable Dust Sampler at selected locations to monitor ambient air quality w.r.t. Suspended particulate matter (SPM), Respirable Particulate Matter (PM-10), Sulphur di-oxide (SO₂) and Oxides of nitrogen (NO_x) etc.

SPM/ PM-10 : Ambient air laden with suspended particulates enters the Respirable Dust Sampler through the inlet pipe of sampler by means of a high flow rate blower (1.1 to 1.5 m³/min.). As the air passes through the cyclone, coarse, non-respirable dust

(size > 10 μ) is separated from the air stream by centrifugal forces acting on the solid particles. These separated particles fall through the cyclone's conical hopper and collect in the sampling bottle placed at bottom. The fine dust forming the respirable fraction (size < 10 μ) of the Total Suspended Particulates passes through the cyclone and is carried by the air stream to the Glass Micro Fiber Filter Paper. The Respirable dust (PM-10) is retained by the filter and the carrier air exhausted from the system through the blower. The mass concentration ($\mu\text{g}/\text{m}^3$) of Suspended Particulate Matter (non-respirable dust and respirable dust) and Respirable Particulate Matter (PM-10) in the ambient air are computed by measuring the mass of collected particulates and the volume of air sampled.

PM2.5 : Ambient air enters the Fine dust sampler through an omni-directional air inlet designed to provide a clear aerodynamic cut point for particles greater than 10 microns. Particles in the air stream finer than 10 microns proceed to a second impactor that has an aerodynamic cut point at 2.5 microns. The air sample and fine particulates exiting from the PM 2.5 impactor are passed through a 47 mm diameter Teflon filter membrane that retains the PM-2.5. The mass concentrations ($\mu\text{g}/\text{m}^3$) of PM-2.5 in the ambient air are computed by measuring the mass of collected particulates and the volume of air sampled.


Heavy Metals : Heavy Metals in Air Samples like Arsenic (As), Lead (Pb), Nickel (Ni), Chromium (Cr) and Cadmium (Cd) are analysed twice a year as per CPCB's guidelines after digestion of samples in microwave digester, with the help of Atomic Absorption Spectrophotometer (AAS) with Hydride generation system and Graphite furnace.

NO_x : Determination of oxides of Nitrogen is based on the procedure of "Jacobs and Hochheiser method". In this method the air sample is collected 24 hourly in the field and analysed in the laboratory using spectronic 20 D+ Spectrophotometer. Nitrogen oxides as Nitrogen di-oxide are collected by bubbling air through a Sodium hydroxide solution to form a stable solution of Sodium nitrite. The nitrite ion produced during sampling is determined colorimetrically (with the help of Spectrophotometer, measuring absorbance at 540 nm) by reacting the exposed absorbing reagent with Phosphoric acid, Sulphanilamide and N(1-naphthyl) ethylenediamine dihydrochloride. The interference of Sulphur di-oxide is eliminated by converting it to Sulphuric acid with Hydrogen peroxide before analysis.

SO₂ : Determination of SO₂ is based on the procedure of West and Gaeke method. Sulphur di-oxide from the air stream is absorbed in a Sodium tetrachloromercurate solution to form a stable solution of Dichlorosulphitomercurate. The amount of Sulphur dioxide is then estimated by the colour produced when P-Rosaniline hydrochloride is added to the solution. The colour is estimated by a reading of absorbance at 560 nm in the Spectrophotometer.

Water : Mine water discharge is collected on fortnightly basis in plastic zaricane and is transported to the laboratory for analysis. As per the Env. (Protection) Amendment Rules published vide Gazette dt. 25.9.2000, water samples are analysed fortnightly for the parameters - pH, TSS, Oil & Grease and COD and once in a year for all parameters as per Schedule VI, Env. Protection rule.

Noise : Noise level data are recorded fortnightly.

Environment Laboratory CMPDI, RI IV, Nagpur	Test Report	 TC - 7102
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TEST REPORT NO. : RIN/TR/JUNE-19/A51 DATE OF ISSUE: 05.08.19
 NAME OF CUSTOMER: WCL, NAGPUR SAMPLE DESCRIPTION: AIR SAMPLE
 CUSTOMER LETTER REF. NO. : WCL/HQ/ENV/17-K/520-522 DATED-18.04.19
 NO. OF PAGES: 2
 TEST REQUIRED: IS-5182 [PM-10(04:1999), NOx (06:2006), SO2 (02:2001)], SPM*, PM-2.5 (USEPA METHOD)

AIR QUALITY MONITORING DATA

NAME OF THE COMPANY : WCL YEAR : 2019
 NAME OF THE AREA : MAJRI MONTH : JUNE
 NAME OF THE PROJECT : NAVIN-KUNADA OCP

Chargaon Intake well					
DATE OF SAMPLING	Parameters (24 hourly values in µg/m3)				
	SPM*	PM-10	PM-2.5	NOx	SOx
08/06/2019	181	107	43	21	19
25/06/2019	89	62	25	22	17
TLV as per Env.(Protection) Amendment Rule 2000	600	300	60	120	120
Ekta Nagar colony					
DATE OF SAMPLING	Parameters (24 hourly values in µg/m3)				
	SPM*	PM-10	PM-2.5	NOx	SOx
08/06/2019	170	77	42	21	15
24/06/2019	88	61	23	22	17
Permissible Limits	200	100	60	80	80
Near Deulwada village					
DATE OF SAMPLING	Parameters (24 hourly values in µg/m3)				
	SPM*	PM-10	PM-2.5	NOx	SOx
08/06/2019	190	96	46	20	7
25/06/2019	92	75	45	18	10
Permissible Limits	200	100	60	80	80

#-Above Std Value.

SAM Office Chargaon					
DATE OF SAMPLING	Parameters (24 hourly values in µg/m3)				
	SPM*	PM-10	PM-2.5	NOx	SOx
09/06/2019	335	149	54	20	15
25/06/2019	95	64	27	12	11
Permissible Limits	600	300	60	120	120

#-Above Std Value.

(Scientific Assistant)

Deepanshu Sahu
(Authorized Signatory)

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NOISE LEVEL DATA

NAME OF THE COMPANY : WCL YEAR : 2019
 NAME OF THE AREA : MAJRI MONTH : JUNE
 NAME OF THE PROJECT : NAVIN-KUNADA OCP

Name of the Location : Chargaon CHP - MNON-1

Month	Date of Data collection	Noise Level in dB(A)	
		Day Time	Night Time
JUNE.2019	07/06/2019	48.5	47.6
JUNE.2019	25/06/2019	55.4	54.1
Noise Level Standard as per Env. (Protection) Amendment rule 2000		75	70

Name of the Location : Ekta Nagar Colony- MNON-2

Month	Date of Data collection	Noise Level in dB(A)	
		Day Time	Night Time
JUNE.2019	07/06/2019	42.7	41.3
JUNE.2019	22/06/2019	43.4	42.6
Noise Level Standard as per Env. (Protection) Amendment rule 2000		55	45

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ENVIRONMENTAL MONITORING REPORT

NAVIN KUNADA OC

MAJRI AREA

WESTERN COALFIELDS LTD.

JOB NO. 8000003



JULY 2019

Environment Laboratory

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4	NOISE LEVEL DATA	5

INTRODUCTION

Navin Kunada OC is located in Chandrapur district of Maharashtra state. The project is administered by Majri Area of Western Coalfields Limited. The Wardha River is the main drainage channel for the surrounding area. The climate of the area is tropical. Transportation roads, agricultural and local activities, vehicular traffic etc also contributes to the pollution.

Sampling Location:

Ambient Air Quality Monitoring locations:

SL. NO.	LOCATION DETAIL	LOCATION CODE
1	SAM OFFICE CHARGAON:	MNOA1
2	EKTA NAGAR COLONY:	MNOA2
3	NEAR DEULWADA VILLAGE:	MNOA3
4	CHARGAON INTAKE WELL:	MNOA4

Noise Level Monitoring location :


SL. NO.	LOCATION DETAIL	LOCATION CODE
1	CHARGAON CHP:	MNON1
2	EKTA NAGAR COLONY:	MNON2

Frequency of Monitoring:

AIR: Frequency of monitoring is as per the Env. (Protection) Amendment Rules published vide Gazette dt. 25.9.2000.

WATER: Water quality is monitored on fortnightly basis

NOISE: Noise level is monitored on fortnightly basis.

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Air quality monitoring data	 TC-7102
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TSET REPORT NO.	RIN/TR/JULY-19/A45	DATE OF ISSUE	31.08.19
NAME OF CUSTOMER	WCL, NAGPUR	SAMPLE DESCRIPTION	AIR SAMPLE
CUSTOMER LETTER REFERENCE NO.	WCL/HQ/ENV/17-K/520-522 DATED: 18.04.19		
TEST REQUIRED	IS-5182 [PM-10(04:1999), NOx(06:2006), SO2(02:2001)], PM-2.5 & SPM*		
NAME OF AREA	MAJRI AREA	YEAR	2019
NAME OF PROJECT	NAVIN KUNADA OC	MONTH	JULY

SAM OFFICE CHARGAON: MNOA1					
DATE OF SAMPLING	PARAMETERS				
	SPM*	PM ₁₀	PM _{2.5}	NO _x	SO ₂
DETECTION LIMIT	5	5	2	6	10
07-07-19	90	71	46	19	12
25-07-19	159	80	37	19	11
TLV	600	300	60	120	120

EKTA NAGAR COLONY: MNOA2					
DATE OF SAMPLING	PARAMETERS				
	SPM*	PM ₁₀	PM _{2.5}	NO _x	SO ₂
DETECTION LIMIT	5	5	2	6	10
06-07-19	112	52	29	19	11
24-07-19	79	47	24	20	16
TLV	200	100	60	80	80

NEAR DEULWADA VILLAGE: MNOA3					
DATE OF SAMPLING	PARAMETERS				
	SPM*	PM ₁₀	PM _{2.5}	NO _x	SO ₂
DETECTION LIMIT	5	5	2	6	10
06-07-19	66	49	31	20	11
24-07-19	83	51	27	19	11
TLV	200	100	60	80	80

CHARGAON INTAKE WELL: MNOA4					
DATE OF SAMPLING	PARAMETERS				
	SPM*	PM ₁₀	PM _{2.5}	NO _x	SO ₂
DETECTION LIMIT	5	5	2	6	10
07-07-19	67	46	23	19	13
24-07-19	107	63	24	20	15
TLV	200	100	60	80	80

SCIENTIFIC ASSISTANT

DEEPANSHU SAHU
 AUTHORIZED SIGNATORY

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NOISE LEVEL DATA

NAME OF AREA: MAJRI AREA YEAR: 2019
NAME OF PROJECT: NAVIN KUNADA OC MONTH: JULY

CHARGAON CHP: MNON1			
MONTH	DATE OF DATA COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
JULY 2019	04-07-19	55.6	54.3
JULY 2019	25-07-19	54.3	53.2
TLV		75	70

EKTA NAGAR COLONY: MNON2			
MONTH	DATE OF DATA COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
JULY 2019	06-07-19	43.6	42
JULY 2019	25-07-19	42.8	41.4
TLV		55	45

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ENVIRONMENTAL MONITORING REPORT

NAVIN KUNADA OC

MAJRI AREA

WESTERN COALFIELDS LTD.

JOB NO. 8000003



AUGUST 2019

Environment Laboratory

NABL Accredited vide Cert. No. TC-7102

CMPDI

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

AN ISO 9001:2015 COMPANY

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INTRODUCTION

Navin Kunada OC is located in Chandrapur district of Maharashtra state. The project is administered by Majri Area of Western Coalfields Limited. The Wardha River is the main drainage channel for the surrounding area. The climate of the area is tropical. Transportation roads, agricultural and local activities, vehicular traffic etc also contributes to the pollution.

Sampling Location:

Ambient Air Quality Monitoring locations:

SL. NO.	LOCATION DETAIL	LOCATION CODE
1	SAM OFFICE CHARGAON:	MNOA1
2	EKTA NAGAR COLONY:	MNOA2
3	NEAR DEULWADA VILLAGE:	MNOA3
4	CHARGAON INTAKE WELL:	MNOA4

Noise Level Monitoring location :


SL. NO.	LOCATION DETAIL	LOCATION CODE
1	CHARGAON CHP:	MNON1
2	EKTA NAGAR COLONY:	MNON2

Frequency of Monitoring:

AIR: Frequency of monitoring is as per the Env. (Protection) Amendment Rules published vide Gazette dt. 25.9.2000.

WATER: Water quality is monitored on fortnightly basis

NOISE: Noise level is monitored on fortnightly basis.

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Air quality monitoring data	 TC-7102
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TSET REPORT NO.	RIN/TR/AUGUST-19/A45	DATE OF ISSUE	31.09.19
NAME OF CUSTOMER	WCL, NAGPUR	SAMPLE DESCRIPTION	AIR SAMPLE
CUSTOMER LETTER REFERENCE NO.	WCL/HQ/ENV/17-K/520-522 DATED: 18.04.19		
TEST REQUIRED	IS-5182 [PM-10(04:1999), NOx(06:2006), SO2(02:2001)], PM-2.5 & SPM*		
NAME OF AREA	MAJRI AREA	YEAR	2019
NAME OF PROJECT	NAVIN KUNADA OC	MONTH	AUGUST

SAM OFFICE CHARGAON: MNOA1					
DATE OF SAMPLING	PARAMETERS				
	SPM*	PM ₁₀	PM _{2.5}	NO _x	SO ₂
DETECTION LIMIT	5	5	2	6	10
05-08-19	78	34	26	21	16
25-08-19	133	126	31	11	19
TLV	600	300	60	120	120

EKTA NAGAR COLONY: MNOA2					
DATE OF SAMPLING	PARAMETERS				
	SPM*	PM ₁₀	PM _{2.5}	NO _x	SO ₂
DETECTION LIMIT	5	5	2	6	10
04-08-19	31	26	19	13	17
27-08-19	85	69	33	21	20
TLV	200	100	60	80	80

NEAR DEULWADA VILLAGE: MNOA3					
DATE OF SAMPLING	PARAMETERS				
	SPM*	PM ₁₀	PM _{2.5}	NO _x	SO ₂
DETECTION LIMIT	5	5	2	6	10
04-08-19	158	37	25	20	17
27-08-19	61	44	29	19	11
TLV	200	100	60	80	80

CHARGAON INTAKE WELL: MNOA4					
DATE OF SAMPLING	PARAMETERS				
	SPM*	PM ₁₀	PM _{2.5}	NO _x	SO ₂
DETECTION LIMIT	5	5	2	6	10
04-08-19	56	46	31	21	19
25-08-19	67	44	24	20	14
TLV	200	100	60	80	80

SCIENTIFIC ASSISTANT

DEEPANSHU SAHU
AUTHORIZED SIGNATORY

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NOISE LEVEL DATA

NAME OF AREA: MAJRI AREA YEAR: 2019
NAME OF PROJECT: NAVIN KUNADA OC MONTH: AUGUST

CHARGAON CHP: MNON1			
MONTH	DATE OF DATA COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
AUGUST 2019	04-08-19	53.4	52.1
AUGUST 2019	24-08-19	54.6	53.4
TLV		75	70

EKTA NAGAR COLONY: MNON2			
MONTH	DATE OF DATA COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
AUGUST 2019	04-08-19	41.4	40.9
AUGUST 2019	23-08-19	43.5	42.3
TLV		55	45

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ENVIRONMENTAL MONITORING REPORT

NAVIN KUNADA OC

MAJRI AREA

WESTERN COALFIELDS LTD.

JOB NO. 8000003



SEPTEMBER 2019

Environment Laboratory

NABL Accredited vide Cert. No. TC-7102

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REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
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INTRODUCTION

Navin Kunada OC is located in Chandrapur district of Maharashtra state. The project is administered by Majri Area of Western Coalfields Limited. The Wardha River is the main drainage channel for the surrounding area. The climate of the area is tropical. Transportation roads, agricultural and local activities, vehicular traffic etc also contributes to the pollution.

Sampling Location:

Ambient Air Quality Monitoring locations:

SL. NO.	LOCATION DETAIL	LOCATION CODE
1	SAM OFFICE CHARGAON:	MNOA1
2	EKTA NAGAR COLONY:	MNOA2
3	NEAR DEULWADA VILLAGE:	MNOA3
4	CHARGAON INTAKE WELL:	MNOA4

Noise Level Monitoring location :


SL. NO.	LOCATION DETAIL	LOCATION CODE
1	CHARGAON CHP:	MNON1
2	EKTA NAGAR COLONY:	MNON2

Frequency of Monitoring:

AIR: Frequency of monitoring is as per the Env. (Protection) Amendment Rules published vide Gazette dt. 25.9.2000.

WATER: Water quality is monitored on fortnightly basis

NOISE: Noise level is monitored on fortnightly basis.

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Air quality monitoring data	 TC-7102
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TSET REPORT NO.	RIN/TR/SEPTEMB-19/A45	DATE OF ISSUE	31.10.19
NAME OF CUSTOMER	WCL, NAGPUR	SAMPLE DESCRIPTION	AIR SAMPLE
CUSTOMER LETTER REFERENCE NO.	WCL/HQ/ENV/17-K/520-522 DATED: 18.04.19		
TEST REQUIRED	IS-5182 [PM-10(04:1999), NOx(06:2006), SO2(02:2001)], PM-2.5 & SPM*		
NAME OF AREA	MAJRI AREA	YEAR	2019
NAME OF PROJECT	NAVIN KUNADA OC	MONTH	SEPTEMBER

SAM OFFICE CHARGAON: MNOA1					
DATE OF SAMPLING	PARAMETERS				
	SPM*	PM ₁₀	PM _{2.5}	NO _x	SO ₂
DETECTION LIMIT	5	5	2	6	10
06-09-19	50	43	24	17	<10
21-09-19	72	22	12	9	<10
TLV	600	300	60	120	120


EKTA NAGAR COLONY: MNOA2					
DATE OF SAMPLING	PARAMETERS				
	SPM*	PM ₁₀	PM _{2.5}	NO _x	SO ₂
DETECTION LIMIT	5	5	2	6	10
04-09-19	54	45	25	18	<10
20-09-19	47	22	12	9	<10
TLV	200	100	60	80	80

NEAR DEULWADA VILLAGE: MNOA3					
DATE OF SAMPLING	PARAMETERS				
	SPM*	PM ₁₀	PM _{2.5}	NO _x	SO ₂
DETECTION LIMIT	5	5	2	6	10
04-09-19	68	52	29	21	11
20-09-19	50	24	13	10	<10
TLV	200	100	60	80	80

CHARGAON INTAKE WELL: MNOA4					
DATE OF SAMPLING	PARAMETERS				
	SPM*	PM ₁₀	PM _{2.5}	NO _x	SO ₂
DETECTION LIMIT	5	5	2	6	10
06-09-19	132	127	70	51	26
20-09-19	76	33	18	13	<10
TLV	200	100	60	80	80



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NOISE LEVEL DATA

NAME OF AREA: MAJRI AREA YEAR: 2019
NAME OF PROJECT: NAVIN KUNADA OC MONTH: SEPTEMBER

CHARGAON CHP: MNON1			
MONTH	DATE OF DATA COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
SEPTEMBER	06-09-19	50.4	49.2
SEPTEMBER	19-09-19	52.6	51.2
TLV		75	70

EKTA NAGAR COLONY: MNON2			
MONTH	DATE OF DATA COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
SEPTEMBER	06-09-19	43.2	42.4
SEPTEMBER	19-09-19	44.9	42.7
TLV		55	45