

# JAYASWAL NECO INDUSTRIES LTD

CIN : L28920MH1972PLC016154

(STEEL PLANT DIVISION)

SILTARA GROWTH CENTRE, BILASPUR ROAD, SILTARA, RAIPUR - 493111 (C.G.) - INDIA

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JNIL/ENV/Metabodeli/25 Ha./2022/187

Date : 01/12/2022

**The Deputy Director General of Forests (Central),**  
Ministry of Environment, Forest & Climate Change,  
Regional Office(Western Central Zone),  
Ground Floor East Wing, New Secretariate Building,  
Civil Lines, Nagpur-440 001.

**Sub:- Six Monthly EC compliance Report for the period 1<sup>st</sup> April, 2022 to 30th Sept., 2022 Of Metabodeli Open cast Iron Ore Mine with production capacity 1.0 Million TPA, (Lease area-25 ha.) located near village - Metabodeli, Tehsil-Pakhanjur, District-Kanker (Chhattisgarh).**

Ref :- 1. E.C. Vide Order No.64/SEIAA, C.G./Mine/Kanker/557 Naya Raipur dated.17/04/2017.  
2. Amendment EC Vide Order No.338/SEIAA, C.G./Mine/Kanker /557, Naya Raipur Dated.11/07/2017.

Sir,

This has with reference to the above referred letter on the subject matter. Please find enclosed herewith the Six Monthly Environmental Clearance Compliance Report of Metabodeli Iron Ore Mine-25 Ha, village - Metabodeli, Tehsil-pakhanjur, District-Kanker (Chhattisgarh) for the period **1<sup>st</sup> April, 2022 to 30<sup>th</sup> Sept., 2022**. We had also tried to submit online Six Monthly EC compliance report on Parivesh 2.0 but it could not be submitted online due to some unknown problem on Parivesh Portal.

This is for your kind information please.

Thanking you,

Yours faithfully,

**For Jayaswal Neco Industries Ltd.**

  
**Susanta Kumar Moitra**  
Associate Director

Encl : As above.

CC to :

1. The Member Secretary, Chhattisgarh Environmental Conservation Board, Paryavas Bhavan, North Block Sector-19, Atal Nagar, Raipur(C.G.) 490 099.	2. The Zonal Officer, Central Pollution Control Board, Sahkar Bhawan, 3 <sup>rd</sup> Floor, North T.T. Nagar, Bhopal(M.P.).
3. The Regional Officer, Integrated Regional Office, MoEF & CC, Govt. of India, Aranya Bhawan, North Block, Sector-19, Nava Raipur, Atal Nagar, Chhattisgarh.	4. The MS – SEAC, Chhattisgarh, Paryavas Bhavan, North Block Sector-19, Naya Raipur(C.G.) 490 099.

**Compliance Status of Environment Clearance**  
**(Period from 1<sup>st</sup> April, 2022 to 30<sup>th</sup> Sept., 2022)**

**Capacity & Location:-** Metabodeli Opencast Iron Ore Mine with production capacity 1.0 Million TPA, (Lease area-25 ha.) issued vide letter 64/SEIAA, C.G./Mine/Kanker/557 Naya Raipur dated.17/04/2017 & its amendment letter No. 338/SEIAA, C.G./Mine/Kanker /557, Naya Raipur Dated.11/07/2017 located near village - Metabodeli, Tehsil-pakhanjur, District-Kanker(Chhattisgarh).

1. **EC Letter No:-** 64/SEIAA, C.G./Mine/Kanker/557 Naya Raipur dated.17/04/2017.
2. **EC amendment Letter No:-** 338/SEIAA, C.G./Mine/Kanker/557 Naya Raipur dated.11/07/2017.

i)	Benificiation of iron ore (wet or dry) shall not be carried out by the project proponent within lease area.	Noted for compliance.
ii)	Top soil shall be stacked properly with proper slope with adequate safeguards. Plantation shall be done on it after storing the topsoil in barrier zone.	No topsoil generated, as the mine itself is a rocky hill although we have earmarked dump site for the same and will be utilized as and when top soil is encountered.
iii)	Over burden shall be stacked at earmarked dump site(s) only and shall not be kept active for long period. The OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining.	Over burden earmarked area for the storage of over burden. Overburdens in the form of fines are getting generated in the mine which is stored in the earmarked place and will be further used for back filling in the region.
iv)	Project authority shall provide adequate facility for proper treatment of industrial effluent (if any) and domestic effluent. Domestic effluent shall be treated in well-designed septic tank and soak pits. In case of any failure of effluent treatment arrangement, it shall be immediate rectified or same alternate arrangement shall be provided. Treated effluent shall be utilized either in process or for plantation purposes within plant premises only. Project authority shall make arrangement of suitable drains/pipe networks to ensure adequate flow for full utilization of treated effluent inside the premises. No effluent shall be discharged out of mine premises under any circumstances. Hence zero discharge condition outside the premises shall be maintained all the time. Project authority shall ensure the treated effluent quality within standard prescribed by Ministry of Environment, Forest and Climate Change, Government of India. Industrial wastewater shall conform to the standards prescribed under GSR 422 (E) dated.19 <sup>th</sup> May, 1993 and December, 1993 or as amended form time to time.	There is no industrial waste water generated from the mining operation. Domestic effluents are collected in soak pits. No effluent discharged out of mine premises. Please be informed that the area is highly naxal infected and the mining is done only in general shift hence domestic waste water also not generated. However necessary precaution will be take care.

v)	Any liquid effluent what so ever generated from mining activities shall not be discharged into the river or any surface water bodies under any circumstances, and it shall be reused wholly in the process/plantation. All the industrial effluent generated shall be re-circulated/reused after proper treatment. Project authority shall provide sewage treatment system of adequate capacity for treatment of domestic effluent generated. The untreated/treated domestic effluent shall not be discharge in to the river or any surface water bodies. The treated domestic effluent shall be used for plantation purpose after proper disinfection. The concept of zero discharge shall be maintained all the time except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.	There is no industrial waste water generated from the mine operation. Domestic effluent being treated in Soak pit in the mine. No effluent discharged out of mine premises. Hence zero discharge condition outside the premises being maintained. Please be informed that the area is highly naxal infected and the mining is done only in general shift hence domestic waste water also not generated. However necessary precaution will be take care.
vi)	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year – pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to SEIAA, Chhattisgarh, Central Ground Water Authority and Regional Director Central Ground Water Board.	Monitoring of Ground Water Report for the month of August, 2022 is attached here with as <b>Annexure-I</b> .
vii)	Prior permission from the competent authority shall be obtained for drawl of ground water if any.	Permission obtained of 50 KL/ day from CGWA.
viii)	The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	Necessary conservation measures to augment ground water resources in the area being taken.
ix)	Adequate no of garland drains and check dams shall be constructed to arrest silt and sediment flows from soil and mineral dumps. The water so collected shall be utilised for watering the mine area roads, green belt development etc. after proper treatment. The drains shall be regularly desilted particularly after monsoon and maintained properly.	Garland drain & siltation pit has been constructed to arrest silt and sediment flows from soil and mineral dumps in the mine during rainy season.
x)	Project authority shall provide adequate air pollution control arrangements at all point and non point sources(if any). Project authority shall install suitable & effective air pollution control equipment's at all transfer points, junction points etc. also. All the conveying system, transfer point, junction point etc. shall be covered. Adequate provision shall be made for sprinkling of water at strategic locations to ensure dust does not get air borne. For controlling fugitive dust, regular sprinkling of water in vulnerable areas shall be ensured. All air pollution Control systems shall be kept in	Adequate air pollution control arrangements done. All transfer points and conveyor belt covered to prevent dust emission. Green net surrounding Crusher & Screen as well as beside the roads. Fogging and water sprinkling system are installed and in operation for controlling the dust emission.

	good running conditions all the time and failure (if any), shall be immediately rectified without delay otherwise similar alternate arrangement shall be made. The emission of pollutants from any point source (if any) shall not exceed the following limit :- Particulate Matter : 50 mg/Mm <sup>3</sup> (Fifty Milligram per Normal Cubic Meter)	
xi)	Four ambient air quality – monitoring stations shall be established in the core zone as well as in the buffer zone for PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Since it is an operating mine air monitoring stations are established and data of air quality is monitored on regular intervals and submitted regularly. Air quality monitoring report for the period <b>1<sup>st</sup> April, 2022 to 30<sup>th</sup> Sept., 2022</b> is enclosed for your reference - <b>Annexure-A</b> .
xii)	Data on ambient air quality (PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> and NO <sub>x</sub> ) should be regularly monitored. The data so collected shall be properly analysed and submitted to the Chhattisgarh Environment Conservation Board, Naya Raipur, Regional Office, Chhattisgarh Environment Conservation Board, Jagdalpur, SEIAA, Chhattisgarh and Regional Office, Ministry of Environment, Forest and Climate Change, Government of India, Nagpur in every six months.	Since it is an operating mine air monitoring stations are established and data of air quality is monitored on regular intervals and submitted regularly. Last Air quality monitoring report for the period 1 <sup>st</sup> Oct., 2021 to 31 <sup>st</sup> March, 2022 is submitted to all concern govt. offices vide our letter No.JNIL/ENV/Metabodeli/25 Ha. / 2022/88 Dated.27/05/2022.
xiii)	Fugitive dust emissions from all the sources shall be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points shall be provided and properly maintained.	Crusher and Screen unit are covered with green net, and water sprinkling and fogging system for control of dust emission are installed and operational.
xiv)	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of minerals. The vehicles shall be covered with a tarpaulin and shall not be overloaded.	Complied. Only covered vehicles used for transportation of minerals.
xv)	Measures shall be taken for control of noise levels in the work environment. Workers engaged in operations of HEMM, etc. shall be provided with ear plugs/muffs.	Noise monitoring being carried. Air quality monitoring report for the period <b>1<sup>st</sup> April, 2022 to 30<sup>th</sup> Sept, 2022</b> is enclosed for your reference - <b>Annexure-B</b> .
xvi)	A Final Mine Closure Plan shall be submitted to the SEIAA, Chhattisgarh, 5 years in advance of final mine closure for approval.	Progressive Mine closure plan approved by IBM, has been submitted to SEIAA vide letter no. JNIL/ENV/Metabodeli(25 Ha) / 2018 /296 dated 04.10.2018.
xvii)	Plantation shall be raised by planting the native species around the ML area, roads, OB dump sites etc. in consultation with the local DFO / Agriculture Department.	1000 saplings have planted in safety zone, OB dump area during monsoon, 2022 Saplings plants –

		Karanj, Black Cirus, White Cirus, Mango & Amrud.						
xviii)	No change in mining technology and scope of working shall be made without prior approval of the SEIAA, Chhattisgarh.	Noted.						
xix)	No change in calendar plan including excavation, quantum of mineral iron ore shall be made.	Noted.						
xx)	Conversation measures for protection of flora and fauna in the core & buffer zone shall be drawn up in consultation with local forest and wildlife department.	Noted.						
xxi)	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	Orientation training & information on safety and occupational health aspects are given to workers. Appropriate PPE's has been given to all workers. Regular health checking of the workers is undertaken.						
xxii)	The project authorities shall inform to SEIAA, Chhattisgarh regarding date of financial closures and the date of start of land development work.	The mine is in operation since 2002, and information in this regards had been submitted to MOEF.						
xxiii)	The funds earmarked for environmental protection measures shall be kept in separate account and should not be diverted for other purpose. Year wise expenditure shall be reported to the SEIAA, Chhattisgarh.	<p>Funds earmarked for environments protection measures have been kept in separate account. In CSR expenses for the period from 1<sup>st</sup> April, 2022 to 30<sup>th</sup> Sept., 2022 Rs.34,90,470.02(RupeesThirty Four Lakhs Ninty Thousand Four Hundred Seventy Only) for head of expenditures in Health care, sanitation and Providing Drinking Water, Promotion of Education and Training, Sports Activities, Women Empowerment, Promotion Development of Traditional Art, Culture &amp; Community Welfare, Rural &amp; Infrastructure Development. Six monthly Environmental expenditure given below :-</p> <table border="1"> <thead> <tr> <th>Sr. No.</th><th>Year</th><th>Env, Expenditure (Lakh)</th></tr> </thead> <tbody> <tr> <td>1</td><td>1<sup>st</sup> April., 2022 to 30<sup>th</sup> Sept., 2022.</td><td>Rs.14,52,016.00</td></tr> </tbody> </table>	Sr. No.	Year	Env, Expenditure (Lakh)	1	1 <sup>st</sup> April., 2022 to 30 <sup>th</sup> Sept., 2022.	Rs.14,52,016.00
Sr. No.	Year	Env, Expenditure (Lakh)						
1	1 <sup>st</sup> April., 2022 to 30 <sup>th</sup> Sept., 2022.	Rs.14,52,016.00						
xxiv	Occupational health Surveillance of the workers should be done on a regular basis and records maintained as	Regular health checkup of the workers has been done to observe						

	per the Factories Act.	any contractions due to exposure of dust.
xxv)	Project authority shall establish an environmental management cell to carry out function relating to environmental management under the supervision of senior executive who shall directly report to the head of organisation. A full fledged laboratory with qualified technical/scientific staffs to monitor the in fluent, effluent, ground water, surface water, soil, stack emission and ambient air quality etc. shall be provided.	Complied centralized environment cell with full fledged laboratory is established at Bhanupratappur Office and Steel Plant Division Raipur for monitoring and analysis of all the parameters.
xxvi)	The issuance of this environmental clearance does not convey any property rights in either real or personal property, or any exclusive privileges, nor does not authorise any injury to private property or any invasion of personal rights, nor any infringement of Central, State or Local laws or regulations.	Noted.
xxvii)	SEIAA, Chhattisgarh reserves the right to amend/cancel any of the conditions and add new conditions and make further stringent the emission/effluent limit as and when deemed necessary in the interest of environmental protection, change in the project profile or non-satisfactory implementation of the stipulated conditions etc.	Noted.
xxviii)	Local persons shall be given employment during construction and operation of the plant.	Noted.
xxix)	The Project proponent shall advertise in at least two local news papers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Chhattisgarh Environment Conservation Board and may also seen at Website of SEIAA, Chhattisgarh at <a href="http://www.seiaacg.org">www.seiaacg.org</a> .	EC advertised on two new papers name Navbharat and Haribhumi on 18.04.2017.
xxx)	Half yearly report on the status of implementation of the stipulated conditions and environment safeguards shall be submitted to the Chhattisgarh Environment Conservation Board, Naya Raipur, Regional Office, Chhattisgarh Environment Conservation Board, Jagdalpur, SEIAA, Chhattisgarh and Regional Office, Ministry of Environment, Forest and Climate Change, Government of India, Nagpur.	Last half year reports submitted vide our letter No.JNIL/ENV/Metabodeli / 25 Ha. / 2022 / 88 Dated. 27/05/2022.
xxxi)	Regional Office of the Ministry of Environment, Forest and Climate Change, Government of India at Nagpur shall monitor the implementation of the stipulated conditions. A complete set of documents including	Necessary has been submitted to RO- MoEF & CC, Raipur.

	Environment Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.	
xxxii)	Full Cooperation shall be extended to the Scientists/Officers from the SEIAA, Chhattisgarh, Ministry of Environment, Forest and Climate Change, Government of India/Regional Office, Ministry of Environment, Forest and Climate Change, Government of India, Nagpur/CPCB/Chhattisgarh Environment Conservation Board, who would be monitoring the compliance of environment status.	Noted for Compliance.
xxxiii)	In case of any deviation or alteration in the proposed project from those submitted to this SEIAA, Chhattisgarh for clearance, a fresh reference should be made to the SEIAA, Chhattisgarh to assess the adequacy of the condition(s) imposed and to add additional environment protection measures required, if any. No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, Government of India/SEIAA, Chhattisgarh.	Noted for Compliance.
xxxiv)	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment(Protection) Act, 1986.	Noted for Compliance.
xxxv)	The project authorities must strictly adhere to the stipulations made by the Chhattisgarh Environment Conservation Board(CECB) and the State Government.	Noted for Compliance.
xxxvi)	The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 197, the Air(Prevention and Control of Pollution) Act, 1981, the Environment (Protection) act, 1986 and rules there under, Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.	Noted for Compliance.
xxxvii)	Chhattisgarh Environment Conservation Board shall display a copy of the Clearance letter at the Regional Office, District Trade and Industries Center and Collector's Office/Tehsildars Office for 3 days.	EC letter has been displayed in compliance to this condition.
xxxviii)	Any appeal against this environmental clearance shall lie with the National Green Tribunal, If preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.	Noted.

**Amendment Environment Clearance Compliance report vide order No.338/SEIAA,  
C.G./Mine/Kanker/557, Naya Raipur Dated.11/07/2017.**

S.No	Condition	Compliance
1	The capacity of Crushing Unit (Primary and Secondary) and Double Decker Power Screen Unit shall not be more than 150 TPH and 250 TPH respectively.	Complied.
2	For Air Pollution Control in Crushing & Screening Unit, Industry shall install bag filter with suction Hoods. For Control of Fugitive dust emission in Crushing & Screening unit, at transfer points / Junction points fogging system shall be provided and it shall be covered with green net.	Crusher and Screen unit fully covered and have in built water sprinkling / fogging system for control of dust emission. All transfer points and conveyor belt covered to prevent dust emission.
3	Wind breaking wall shall be constructed in the Crushing & Screening Unit area.	Crusher and Screen unit are covered with green net, and water sprinkling and fogging system for control of dust emission are installed and operational.
4	Ensure to control the particulate matter emission within 50 Mg/Nm <sup>3</sup> .	Noted.





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Name &amp; Address Of The Customer

**TO,**  
**JNIL Metabodeli Iron Ore Mines, (25ha)**  
**Tehsil-Pakhanjur , Village - Chargaon,**  
**District- Kanker, 494635**

REPORT NO.	UES/TR/22-23/03263
LAB REF NO.	UES/22-23/W/08458
DATE OF SAMPLING	24/08/2022
DATE OF RECEIPT	25/08/2022
DATE OF REPORT	30/08/2022
DATE OF ANALYSIS	START: 26/08/2022      END: 30/08/2022

## SAMPLE DETAILS

Customer Sample Id / Sampling Location	Metabodeli 25 ha Near Solar Pump	Customer Ref. No. & Date	4200001168, DATED - 09/06/2022
Sample Type	Ground Water	Sample Condition At Receipt	Ok
Packing of Sample	Plastic Bottle	Sample Collected By	Laboratory Chemist
Other Details	Sealed	Quantity Received	Approx 5 Ltr.

REPORT NO.: 03263

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	pH Value at 25.4°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	5.25
3	Total Suspended Solids	mg/L	IS:3025:(Part-17)	-	-	N.D.
4	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	82.06
5	Chloride (as Cl)	mg/L	IS 3025:(Part-32)	250	1000	8.99
6	Turbidity	NTU	IS 3025:(Part-10)	1	5	5.7
7	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-23)	200	600	24.0
8	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-21)	200	600	46.0
9	Calcium (as Ca)	mg/L	IS 3025:(Part-40)	75	200	12.02
10	Magnesium (as Mg)	mg/L	IS 3025:(Part-46)	30	100	4.37
11	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025:(Part-24)	200	400	8.4
12	Sodium (as Na)	mg/L	APHA 22 <sup>nd</sup> Edition	-	-	2.36
13	Fluoride (as F)	mg/l	IS 3025(part-60)	1	1.5	0.12
14	Nitrate (as NO <sub>3</sub> )	mg/l	IS 3025(part-34)	45	No Relaxation	0.66
15	Silica	mg/L	APHA 22 <sup>nd</sup> Edition	-	-	N.D.
16	Copper (as Cu)	mg/l	IS 3025(part-42)	0.05	1.5	N.D.
17	Iron (as Fe)	mg/l	IS 3025(part-53)	0.3	No Relaxation	0.14
18	Zinc (as Zn)	mg/l	IS 3025(part-49)	5	15	N.D.



**Ultimate**  
ENVIROLYTICAL SOLUTIONS

HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (G.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

REPORT NO.: 03263

**TEST REPORT**

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
19	Chemical Oxygen Demand (COD)	mg/l	IS 3025(part-58)	-	-	N.D.
20	Biochemical Oxygen Demand (BOD) for 3 days at 27°C	mg/l	IS:3025:(Part-44)	-	-	N.D.
21	Nickel (as Ni)	mg/l	IS:3025:(Part-54)	0.02	No Relaxation	N.D.
22	Dissolve Oxygen (DO)	mg/l	IS:3025:(Part-38)	-	-	N.D.
23	Manganese (as Mn)	mg/l	IS 3025(part-59)	0.1	0.3	N.D.
24	Cadmium (as Cd)	mg/l	IS 3025(part-41)	0.003	No Relaxation	N.D.
25	Lead (as Pb)	mg/l	IS 3025(part-47)	0.01	No Relaxation	N.D.
26	Chromium (as Cr)	mg/l	Annex J of IS:13428	0.05	No Relaxation	N.D.
27	Phosphate (as PO <sub>4</sub> )	mg/L	APHA 22 <sup>nd</sup> Edition	-	-	N.D.
28	Arsenic (as As)	mg/l	IS 3025(part-37)	0.01	0.05	N.D.
29	Mercury (as Hg)	mg/l	IS 3025(part-48)	0.001	No Relaxation	N.D.
30	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025(part-43)	0.001	0.002	N.D.
31	Cyanide (as CN)	mg/l	IS 3025(part-27)	0.05	No Relaxation	N.D.
32	Total Coliform	MPN/100ml	IS: 1622:1981:RA:2019	-	-	Absent
33	E. Coli	MPN/100ml	IS: 1622:1981:RA:2019	-	-	Absent

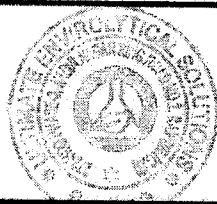
Note: mg/lit.: milligram per liter, N.D.: Not Detected.

**REMARKS: RESULTS ARE AS ABOVE***Terms & conditions*

- > The use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

*R. K. Kumar*  
30/08/22

KOMAL KUMAR  
(SR. CHEMIST)  
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

*Pramod Choubey*  
30/08/22  
PRAMOD CHOUBEY  
(DY. TECHNICAL MANAGER)  
AUTHORIZED SIGNATORY

-----End of the test report-----



HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

<b>TO,</b> <b>JNIL Metabodeli Iron Ore Mines, (25ha)</b> <b>Tehsil-Pakhanjur , Village - Chargaon,</b> <b>District- Kanker, 494635</b>		REPORT NO.		UES/TR/22-23/03264	
		LAB REF NO.		UES/22-23/W/08459	
		DATE OF SAMPLING		24/08/2022	
		DATE OF RECEIPT		25/08/2022	
		DATE OF REPORT		30/08/2022	
		DATE OF ANALYSIS		START: 26/08/2022	END: 30/08/2022
<b>SAMPLE DETAILS</b>					
Customer Sample Id / Sampling Location	Chargaon Village Hand Pump	Customer Ref. No. & Date	4200001168, DATED - 09/06/2022		
Sample Type	Ground Water	Sample Condition At Receipt	Ok		
Packing of Sample	Plastic Bottle	Sample Collected By	Laboratory Chemist		
Other Details	Sealed	Quantity Received	Approx 5 Ltr.		

REPORT NO.: 03264

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	pH Value at 25.4°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	7.2
3	Total Suspended Solids	mg/L	IS:3025:(Part-17)	-	-	N.D.
4	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	122.2
5	Chloride (as Cl)	mg/L	IS 3025:(Part-32)	250	1000	14.99
6	Turbidity	NTU	IS 3025:(Part-10)	1	5	2.2
7	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-23)	200	600	44.0
8	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-21)	200	600	48.0
9	Calcium (as Ca)	mg/L	IS 3025:(Part-40)	75	200	15.23
10	Magnesium (as Mg)	mg/L	IS 3025:(Part-46)	30	100	2.43
11	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025:(Part-24)	200	400	1.86
12	Sodium (as Na)	mg/L	APHA 22 <sup>nd</sup> Edition	-	-	6.4
13	Fluoride (as F)	mg/l	IS 3025(part-60)	1	1.5	0.04
14	Nitrate (as NO <sub>3</sub> )	mg/l	IS 3025(part-34)	45	No Relaxation	0.56
15	Silica	mg/L	APHA 22 <sup>nd</sup> Edition	-	-	N.D.
16	Copper (as Cu)	mg/l	IS 3025(part-42)	0.05	1.5	N.D.
17	Iron (as Fe)	mg/l	IS 3025(part-53)	0.3	No Relaxation	0.16
18	Zinc (as Zn)	mg/l	IS 3025(part-49)	5	15	N.D.



**Ultimate**  
ENVIROLYTICAL SOLUTIONS

Format No.: UL

HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

REPORT NO.: 03264

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
19	Chemical Oxygen Demand (COD)	mg/l	IS 3025(part-58)	-	-	N.D.
20	Biochemical Oxygen Demand (BOD) for 3 days at 27°C	mg/l	IS:3025:(Part-44)	-	-	N.D.
21	Nickel (as Ni)	mg/l	IS:3025:(Part-54)	0.02	No Relaxation	N.D.
22	Dissolve Oxygen (DO)	mg/l	IS:3025:(Part-38)	-	-	N.D.
23	Manganese (as Mn)	mg/l	IS 3025(part-59)	0.1	0.3	N.D.
24	Cadmium (as Cd)	mg/l	IS 3025(part-41)	0.003	No Relaxation	N.D.
25	Lead (as Pb)	mg/l	IS 3025(part-47)	0.01	No Relaxation	N.D.
26	Chromium (as Cr)	mg/l	Annex J of IS:13428	0.05	No Relaxation	N.D.
27	Phosphate (as PO <sub>4</sub> )	mg/L	APHA 22 <sup>nd</sup> Edition	-	-	N.D.
28	Arsenic (as As)	mg/l	IS 3025(part-37)	0.01	0.05	N.D.
29	Mercury (as Hg)	mg/l	IS 3025(part-48)	0.001	No Relaxation	N.D.
30	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025(part-43)	0.001	0.002	N.D.
31	Cyanide (as CN)	mg/l	IS 3025(part-27)	0.05	No Relaxation	N.D.
32	Total Coliform	MPN/100ml	IS: 1622:1981:RA:2019	-	-	Absent
33	E. Coli	MPN/100ml	IS: 1622:1981:RA:2019	-	-	Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- > The use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

*Komal Kumar*  
30/08/22  
**KOMAL KUMAR**  
(SR. CHEMIST)  
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

*Pramod Choubey*  
30/08/22  
**PRAMOD CHOUBEY**  
(DY. TECHNICAL MANAGER)  
AUTHORIZED SIGNATORY

-----End of the test report-----

**Metabodeli Iron Ore Mine(25 Ha), District-Kanker(Chhattisgarh)**  
**Ambient Air Quality Monitoring Data for the Period of 1<sup>st</sup> April-2022 to 30<sup>th</sup> September-2022**

**AMBIENT AIR QUALITY MONITORING DATA FOR THE MONTH OF April - 2022**  
**Metabodeli(25 Ha.)**

Metabodeli(25 Ha.)														
SL. No.	Location	Direction	Parameters											
			PM 10			PM 2.5			SO <sub>2</sub>			NO <sub>x</sub>		
			Min.	Max.	Avg.	Min	Max	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
			100/60			60/40			80/50			80/40		
			Permissible Limit											
1.	Near Security Shed	North	22	45	35	22	26	24	7.2	12.5	9.8	7	12.6	10.1
2.	Near Weigh Bridge	West	22	46	36	20	25	22	7	12.1	9.4	7.1	12.4	10.4
3.	Near Temporary Store	South	24	46	34	20	24	22	7.3	12.7	9.8	7.1	12.5	10.2
4.	Near CAF Camp	East	20	45	34	20	25	22	7.2	12.4	9.7	7	12.2	10

All values are in  $\mu\text{g}/\text{m}^3$

**AMBIENT AIR QUALITY MONITORING DATA FOR THE MONTH OF May - 2022**  
**Metabodeli(25 Ha.)**

SL. No.	Location	Direction	Parameters											
			PM 10			PM 2.5			SO <sub>2</sub>			NO <sub>x</sub>		
			Min.	Max.	Avg.	Min	Max	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
			100/60			60/40			80/50			80/40		
Permissible Limit														
1.	Near Security Shed	North	22	46	36	21	25	23	7	12.8	10.2	7.1	12.4	10.1
2.	Near Weigh Bridge	West	24	45	36	20	26	23	7	11.6	9.4	6.9	12.1	9.9
3.	Near Temporary Store	South	25	47	36	21	25	22	7.1	12.5	9.7	6.9	12.8	10.4
4.	Near CAF Camp	East	20	46	35	20	26	23	7	12.7	10.7	7.2	12.8	10.1

All values are in  $\mu\text{g}/\text{m}^3$

**AMBIENT AIR QUALITY MONITORING DATA FOR THE MONTH OF June - 2022**  
**Metabodeli(25 Ha.)**

SL. No.	Location	Direction	Parameters											
			PM 10			PM 2.5			SO <sub>2</sub>			NO <sub>x</sub>		
			Min.	Max.	Avg.	Min	Max	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
Permissible Limit			100/60			60/40			80/50			80/40		
1.	Near Security Shed	North	22	45	35	21	26	23	6.9	12.5	10.1	7.2	12.2	10.1
2.	Near Weigh Bridge	West	22	46	35	20	25	22	6.8	12	9.4	7.1	12.8	10.2
3.	Near Temporary Store	South	22	46	34	21	25	22	7	12.1	9.6	6.9	12.5	9.7
4.	Near CAF Camp	East	20	45	34	20	25	22	7	12.7	10.7	7.2	12.8	10.1
All values are in µg/m <sup>3</sup>														

All values are in µg/m<sup>3</sup>

**AMBIENT AIR QUALITY MONITORING DATA FOR THE MONTH OF July - 2022**  
**Metabodeli(25 Ha.)**

SL. No.	Location	Direction	Parameters											
			PM 10			PM 2.5			SO <sub>2</sub>			NOx		
			Min.	Max.	Avg.	Min	Max	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
Permissible Limit			100/60			60/40			80/50			80/40		
1.	Near Security Shed	North	22	40	33	21	25	23	7.1	12.4	9.9	7	12.5	10.1
2.	Near Weigh Bridge	West	22	39	32	20	24	22	7.2	12.5	9.7	7	12.4	10
3.	Near Temporary Store	South	22	41	32	18	24	21	6.9	12.6	9.7	7.2	12.2	10.1
4.	Near CAF Camp	East	20	41	32	20	24	21	7.2	12.4	10.4	7	12.3	10

All values are in µg/m<sup>3</sup>

**AMBIENT AIR QUALITY MONITORING DATA FOR THE MONTH OF Aug - 2022**  
Metabodeli(25 Ha.)

SL. No.		Location	Direction	Parameters											
				PM 10			PM 2.5			SO <sub>2</sub>			NO <sub>x</sub>		
				Min.	Max.	Avg.	Min	Max	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
				100/60			60/40			80/50			80/40		
				Permissible Limit											
1.	Near Security Shed	North	22	32	27	14	18	15	7.2	12.7	9.7	7.1	12	9.9	
2.	Near Weigh Bridge	West	22	40	34	16	21	18	6.9	11.1	9.1	7.2	12.4	10.3	
3.	Near Temporary Store	South	21	41	32	18	22	19	7.1	11.9	9.4	7	12.2	9.6	
4.	Near CAF Camp	East	20	32	27	15	20	17	6.8	12.2	9.7	7.2	11.5	10.3	

All values are in  $\mu\text{g}/\text{m}^3$

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**27 AMBIENT AIR QUALITY MONITORING DATA FOR THE MONTH OF Sept. - 2022**  
Metabodeli(25 Ha.)

Parameters																	
SL. No.	Location	Direction	PM 2.5									SO <sub>2</sub>			NO <sub>x</sub>		
			PM 10			Min	Max	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.			
			Min.	Max.	Avg.												
															100/60		
Permissible Limit			21	31	26	14	17	15	7.3	11.7	9.6	8.9	13.9	10.6			
1.	Near Security Shed	North	23	40	32	16	20	19	7.6	12.3	9.8	8.4	11.3	9.9			
2.	Near Weigh Bridge	West	22	43	33	17	22	20	7.6	12.2	9.7	7	13.2	9.6			
3.	Near Temporary Store	South	20	35	28	16	21	18	7.2	11.6	9.6	8.2	13.2	10.4			
4.	Near CAF Camp	East															

All values are in  $\mu\text{g}/\text{m}^3$

**Metabodeli Iron Ore Mine(25.0 Ha.)**  
**Tehsil-Pakhanjur, District-Kanker(C.G.)**  
**Noise Monitoring Data for the Period of 1st April-2022 to 30<sup>th</sup> September, 2022**

**NOISE LEVEL MONITORING DATA FOR THE MONTH OF April - 2022**

Sr. No.	Location	Day Time - 75 dB (A)	
		Min.	Max.
1.	Near Screening Unit	41	59
2.	Near Check Dam	41	56
3.	Near Site Office	40	60
4.	Near O.B. Yard	41	58
		Avg.	
		50	
		48.5	
		50	
		49.5	

# Due to critical law and order situation mines is not operated in night shift hence noise level data for night time is not generated.

**NOISE LEVEL MONITORING DATA FOR THE MONTH OF May - 2022**

Sr. No.	Location	Day Time - 75 dB (A)	
		Min.	Max.
1.	Near Screening Unit	40	57
2.	Near Check Dam	41	59
3.	Near Site Office	40	58
4.	Near O.B. Yard	40	60
		Avg.	
		48.5	
		50	
		49	
		50	

# Due to critical law and order situation mines is not operated in night shift hence noise level data for night time is not generated.



# NOISE LEVEL MONITORING DATA FOR THE MONTH OF June - 2022

Sr. No.	Location	Day Time - 75 dB (A)		
		Min.	Max.	Avg.
1.	Near Screening Unit	41	60	50.5
2.	Near Check Dam	40	56	48
3.	Near Site Office	40	59	49.5
4.	Near O.B. Yard	41	55	48

# Due to critical law and order situation mines is not operated in night shift hence noise level data for night time is not generated.

# NOISE LEVEL MONITORING DATA FOR THE MONTH OF July - 2022

Sr. No.	Location	Day Time - 75 dB (A)		
		Min.	Max.	Avg.
1.	Near Screening Unit	40	60	50
2.	Near Check Dam	41	62	51.5
3.	Near Site Office	40	56	48
4.	Near O.B. Yard	40	61	50.5

# Due to critical law and order situation mines is not operated in night shift hence noise level data for night time is not generated.

**NOISE LEVEL MONITORING DATA FOR THE MONTH OF Aug - 2022**

Sr. No.	Location	Day Time - 75 dB (A)		
		Min.	Max.	Avg.
1.	Near Screening Unit	41	58	49.5
2.	Near Check Dam	40	60	50
3.	Near Site Office	40	57	48.5
4.	Near O.B. Yard	41	59	50

# Due to critical law and order situation mines is not operated in night shift hence noise level data for night time is not generated.

**NOISE LEVEL MONITORING DATA FOR THE MONTH OF Sept. - 2022**

Sr. No.	Location	Day Time - 75 dB (A)		
		Min.	Max.	Avg.
1.	Near Screening Unit	43	60	51.5
2.	Near Check Dam	35	52	43.5
3.	Near Site Office	40	57	48.5
4.	Near O.B. Yard	37	55	46

# Due to critical law and order situation mines is not operated in night shift hence noise level data for night time is not generated.