

# JAYASWAL NECO INDUSTRIES LTD

CIN : L28920MH1972PLC016154

(STEEL PLANT DIVISION)

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

PH. : +91-7721-264241, 264263 FAX : +91-7721-264279, 264240 Email : spd@necoindia.com



JNIL/ENV/Metabodeli/25 Ha./2023/ 73

Date : 26/05/2023

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> October, 2022 to 31<sup>st</sup> March, 2023 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> October, 2022 to 31<sup>st</sup> March, 2023. 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.

  
for 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.

REGD. OFFICE : F-8, MIDC INDUSTRIAL AREA, HINGNA ROAD, NAGPUR - 440 016 (M.S.) (INDIA)

PHONES : +91-7104-237276, 237471, 237472, 236251 FAX : +91-7104-237583, 236255

E-mail : contact@necoindia.com

Website : www.necoindia.com

**Compliance Status of Environment Clearance**  
**(Period from 1<sup>st</sup> October, 2022 to 31<sup>st</sup> March, 2023)**

**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 from 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 Nov., 2022 & Jan, 2023 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.

	<p>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 :-</p> <p>Particulate Matter : 50 mg/Mm<sup>3</sup> (Fifty Milligram per Normal Cubic Meter)</p>	
xi)	<p>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.</p>	<p>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 carried out by NABL Accredited Lab is enclosed for your reference - <b>Annexure-A</b>.</p>
xii)	<p>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.</p>	<p>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> April, 2022 to 30<sup>th</sup> September, 2022 is submitted to all concern govt. offices vide our letter No.JNIL/ENV/Metabodeli/25 Ha. / 2022/187 Dated.01/12/2022.</p>
xiii)	<p>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.</p>	<p>Crusher and Screen unit are covered with green net, and water sprinkling and fogging system for control of dust emission are installed and operational.</p>
xiv)	<p>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.</p>	<p>Complied. Only covered vehicles used for transportation of minerals.</p>
xv)	<p>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.</p>	<p>Noise monitoring being carried. Air quality monitoring report for the period carried out by NABL Accredited Lab is enclosed for your reference - <b>Annexure-B</b>.</p>
xvi)	<p>A Final Mine Closure Plan shall be submitted to the SEIAA, Chhattisgarh, 5 years in advance of final mine closure for approval.</p>	<p>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.</p>
xvii)	<p>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.</p>	<p>1000 saplings have planted in safety zone, OB dump area during monsoon, 2022 Saplings plants –</p>



		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 Environment Statement - 2021-22 Environmental Expenditure Rs.13,76,401.00.</p> <p>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> Oct., 2022 to 31<sup>st</sup> March., 2023.</td><td>Rs.8,97,056.50</td></tr> </tbody> </table>	Sr. No.	Year	Env, Expenditure (Lakh)	1	1 <sup>st</sup> Oct., 2022 to 31 <sup>st</sup> March., 2023.	Rs.8,97,056.50
Sr. No.	Year	Env, Expenditure (Lakh)						
1	1 <sup>st</sup> Oct., 2022 to 31 <sup>st</sup> March., 2023.	Rs.8,97,056.50						
xxiv)	Occupational health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	Regular health checkup of the workers has been done to observe 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,	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.						

	ground water, surface water, soil, stack emission and ambient air quality etc. shall be provided.	
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.	Being Complied.
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 /187 Dated. 01/12/2022.
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 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.	Necessary has been submitted to RO- MoEF & CC, Raipur.
xxxii)	Full Cooperation shall be extended to the Scientists/Officers from the SEIAA, Chhattisgarh, Ministry of Environment, Forest and Climate Change,	Noted.

	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.	
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.
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.
xxxv)	The project authorities must strictly adhere to the stipulations made by the Chhattisgarh Environment Conservation Board(CECB) and the State Government.	Noted.
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.
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> .	We are doing mining of Iron Ore only, hence there is no any other process involve. Only D.G. set is provided there for power backup. D.G. Set monitoring report carried out by NABL Accredited Lab is enclosed for your reference.





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

Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

<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/22-23/05120	
		LAB REF NO.		UES/22-23/W/011651	
		DATE OF SAMPLING		09/11/2022	
		DATE OF RECEIPT		10/11/2022	
		DATE OF REPORT		14/11/2022	
		DATE OF ANALYSIS		START:10/11/2022	END :14/11/2022
<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.: 05120

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A	Organoleptic & Physical Parameters					
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(Part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.4°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	7.03
4	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025:(Part-10)	1	5	1.52
6	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	123.0
B	General Parameters concerning substances undesirable in excessive amounts					
1	Aluminium (as Al)	mg/L	IS 3025(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS 3025(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025:(Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025:(Part-40)	75	200	16.83
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS 3025:(Part-26)	4.0	No Relaxation	N.D.
8	Chloride (as Cl)	mg/L	IS 3025:(Part-32)	250	1000	20.99
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.14
11	Free Residual	mg/L	IS 3025:(Part-26)	0.2	1	N.D.



REPORT NO.: 05120

**TEST REPORT**

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
	Chlorine					
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	0.17
13	Magnesium (as Mg)	mg/L	IS 3025:(Part-46)	30	100	2.92
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	N.D.
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	1.44
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025:(Part-24)	200	400	6.52
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025:(Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-23)	200	600	48.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-21)	200	600	54.0
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.
8	Polynuclear aromatic hydrocarbons (as PAH)	mg/L	APHA 6440	0.0001	No Relaxation	N.D.
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	IS 3025(part-52)	0.05	No Relaxation	N.D.
11	Trihalomethanes:					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.



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.: 05120

**TEST REPORT**

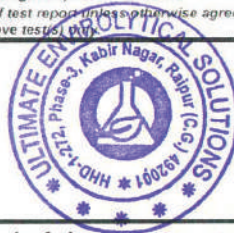
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
12	Total Coliform	MPN/100ml	IS: 1622:1981:RA:2019	-	-	Absent
13	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.

*Komal*  
14/11/2022  
**KOMAL KUMAR**  
(SR. CHEMIST)  
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

*Abhi*  
**ABHIJEET PANDEY**  
(DY. QUALITY 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>Name &amp; Address Of The Customer</b> <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/22-23/05121	
		LAB REF NO.	UES/22-23/W/011652	
		DATE OF SAMPLING	09/11/2022	
		DATE OF RECEIPT	10/11/2022	
		DATE OF REPORT	14/11/2022	
		DATE OF ANALYSIS	START: 10/11/2022	END : 14/11/2022
<b>SAMPLE DETAILS</b>				
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.: 05121

**TEST REPORT**

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A	Organoleptic & Physical Parameters					
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025 (Part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.4°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	6.55
4	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025:(Part-10)	1	5	0.9
6	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	84.0
B	General Parameters concerning substances undesirable in excessive amounts					
1	Aluminium (as Al)	mg/L	IS 3025(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS 3025(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025:(Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025:(Part-40)	75	200	13.63
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS 3025:(Part-26)	4.0	No Relaxation	N.D.
8	Chloride (as Cl)	mg/L	IS 3025:(Part-32)	250	1000	22.99





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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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REPORT NO.: 05121

**TEST REPORT**

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.08
11	Free Residual Chlorine	mg/L	IS 3025:(Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	0.15
13	Magnesium (as Mg)	mg/L	IS 3025:(Part-46)	30	100	5.34
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	N.D.
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	1.62
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025:(Part-24)	200	400	9.16
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025:(Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-23)	200	600	36.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-21)	200	600	56.0
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.





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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

REPORT NO.: 05121

**TEST REPORT**

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.
8	Polynuclear aromatic hydrocarbons (as PAH)	mg/L	APHA 6440	0.0001	No Relaxation	N.D.
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	IS 3025(part-52)	0.05	No Relaxation	N.D.
11	Trihalomethanes:					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
12	Total Coliform	MPN/100ml	IS: 1622:1981:RA:2019	-	-	Absent
13	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.

*Komal Kumar*  
14/11/2022  
**KOMAL KUMAR**  
(SR. CHEMIST)  
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

*Abhijeet Pandey*  
**ABHIJEET PANDEY**  
(DY. QUALITY MANAGER)  
AUTHORIZED SIGNATORY

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





HDD-272, Phase III - Near JP Chowk  
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Name & Address Of The Customer		REPORT NO.	UES/TR/22-23/07132
<b>TO,</b> <b>JNIL Metabodeli Iron Ore Mines, (25ha)</b> <b>Tehsil-Pakhanjur , Village – Chargaon,</b> <b>District- Kanker, 494635</b>		LAB REF NO.	UES/22-23/W/014940
		DATE OF SAMPLING	23/01/2023
		DATE OF RECEIPT	24/01/2023
		DATE OF REPORT	27/01/2023
		DATE OF ANALYSIS	START: 24/01/2023      END : 27/01/2023
SAMPLE DETAILS			
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.: 07132

### TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A	Organoleptic & Physical Parameters					
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025 (Part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.4°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	7.18
4	Taste	-	IS 3025 (part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025:(Part-10)	1	5	1.67
6	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	126.0
B	General Parameters concerning substances undesirable in excessive amounts					
1	Aluminium (as Al)	mg/L	IS 3025 (part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS 3025 (part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025:(Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025:(Part-40)	75	200	17.63
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS 3025:(Part-26)	4.0	No Relaxation	N.D.
8	Chloride (as Cl)	mg/L	IS 3025:(Part-32)	250	1000	17.99
9	Copper (as Cu)	mg/L	IS 3025 (part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025 (part-60)	1	1.5	0.12
11	Free Residual	mg/L	IS 3025:(Part-26)	0.2	1	N.D.





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REPORT NO.: 07132

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
	Chlorine					
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	0.14
13	Magnesium (as Mg)	mg/L	IS 3025:(Part-46)	30	100	4.86
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	N.D.
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	1.49
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025:(Part-24)	200	400	8.68
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025:(Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-23)	200	600	46.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-21)	200	600	64.0
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.
8	Polynuclear aromatic hydrocarbons (as PAH)	mg/L	APHA 6440	0.0001	No Relaxation	N.D.
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	IS 3025(part-52)	0.05	No Relaxation	N.D.
11	Trihalomethanes:					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.



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REPORT NO.: 07132

### TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
12	Total Coliform	MPN/100ml	IS: 1622:1981:RA:2019	-	-	Absent
13	E. Coli	MPN/100ml	IS: 1622:1981:RA:2019	-	-	Absent

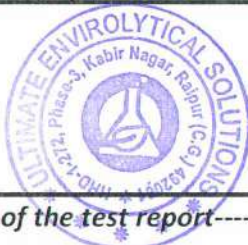
Note: mg/lit.: milligram per liter, N.D.: Not Detected.

#### REMARKS: RESULTS ARE AS ABOVE

##### Terms & conditions

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- ✓ 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*  
27/01/23  
KOMAL KUMAR  
(SR. CHEMIST)  
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

*Pandey*  
ABHIJEET PANDEY  
(DY. QUALITY 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 : ultimatenviron@gmail.com

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<b>Name &amp; Address Of The Customer</b> <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/22-23/07133	
		Lab Ref No	UES/22-23/W/014941	
		Date of Sampling	23/01/2023	
		Date of Report	27/01/2023	
		Date of Receipt	24/01/2023	
		Date of analysis	START: 24/01/2023	END : 27/01/2023
<b>SAMPLE DETAILS</b>				
CUSTOMER SAMPLE ID	CHARGAON RIVER UP-STREAM	CUSTOMER REF. NO. & DATE	VERBAL COMMUNICATION	
SAMPLE TYPE	SURFACE WATER	SAMPLE CONDITION AT RECEIPT	OK	
LATITUDE	20°01'26.9" N	LONGITUDE	80°59'30.48" E	
PACKING OF SAMPLE	PLASTIC BOTTLE	SAMPLE COLLECTED BY	CUSTOMER	
OTHERS DETAILS	SEALED	QUANTITY RECEIVED	APPROX 3 LTR.	

REPORT NO.: 07133

TEST REPORT						
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
A.	Organoleptic & Physical Parameters					
1	Colour	Hazen	IS:3025: (Part-4)	5	15	5.0
2	Odour	-	IS 3025 (part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 24.7°C	-	IS:3025: (Part-11)	6.5-8.5	No Relaxation	6.86
4	Taste	-	IS 3025 (part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025: (Part-10)	1	5	1.19
6	Total Dissolved Solids	mg/L	IS:3025: (Part-16)	500	2000	60.2
B.	General Parameters Concerning Substances undesirable in excessive amounts					
1	Aluminium (as Al)	mg/L	IS 3025 (part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS 3025 (part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025: (Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025: (Part-40)	75	200	11.22
7	Chloride (as Cl)	mg/L	IS 3025: (Part-32)	250	1000	26.99
8	Copper (as Cu)	mg/L	IS 3025 (part-42)	0.05	1.5	N.D.
9	Fluoride (as F)	mg/L	IS 3025 (part-60)	1	1.5	0.12
10	Free Residual Chlorine	mg/L	IS 3025: (Part-26)	0.2	1	N.D.
11	Iron (as Fe)	mg/L	IS 3025 (part-53)	0.3	No Relaxation	0.29
12	Magnesium (as Mg)	mg/L	IS 3025: (Part-46)	30	100	2.91
13	Manganese (as Mn)	mg/L	IS 3025 (part-59)	0.1	0.3	N.D.





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REPORT NO.: 07133

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
14	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	7.60
15	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
16	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025: (Part-24)	200	400	15.46
17	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-23)	200	600	30.0
18	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-21)	200	600	40.0
19	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.
20	Chemical Oxygen Demand	mg/L	IS:3025: (Part-58):2006, RA 2012	-	-	20.6
21	Bio-chemical Oxygen Demand at 27°C for three day	mg/L	IS:3025: (Part-44):1993 RA 2014	-	-	2.0
22	Dissolved oxygen as DO	Mg/L	IS:3025: (Part-44):1993 RA 2014	-	-	5.4
<b>C. Parameters concerning toxic substances: -</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
3	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
4	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.
5	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
6	Chromium (as Cr)	mg/L	IS 3025(part-52)	0.05	No Relaxation	N.D.
<b>F. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml Sample		17
2	E. Coli	MPN/100ml	IS: 1622:1981:RA:2019			9.0

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.
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- This is for information as the party has asked for above test(s) only.

*K. Kumar*  
27/01/23  
**KOMAL KUMAR**  
(SR. CHEMIST)  
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

*Abhijeet Pandey*  
**ABHIJEET PANDEY**  
(DY. QUALITY 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

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<b>Name &amp; Address Of The Customer</b> <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/22-23/07134	
		Lab Ref No	UES/22-23/W/014942	
		Date of Sampling	03/02/2023	
		Date of Report	07/02/2023	
		Date of Receipt	04/02/2023	
		Date of analysis	START: 04/02/2023	END : 07/02/2023
<b>SAMPLE DETAILS</b>				
CUSTOMER SAMPLE ID	CHARGAON RIVER DOWN-STREAM	CUSTOMER REF. NO. & DATE	VERBAL COMMUNICATION	
SAMPLE TYPE	SURFACE WATER	SAMPLE CONDITION AT RECEIPT	OK	
LATITUDE	20°02'10.25" N	LONGITUDE	80°00'36.10" E	
PACKING OF SAMPLE	PLASTIC BOTTLE	SAMPLE COLLECTED BY	CUSTOMER	
OTHERS DETAILS	SEALED	QUANTITY RECEIVED	APPROX 3 LTR.	

REPORT NO.: 07134

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
A.	Organoleptic & Physical Parameters					
1	Colour	Hazen	IS:3025:(Part-4)	5	15	5.0
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 24.7°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	7.32
4	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025:(Part-10)	1	5	0.66
6	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	154
B.	General Parameters Concerning Substances undesirable in excessive amounts					
1	Aluminium (as Al)	mg/L	IS 3025(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS 3025(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025:(Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025:(Part-40)	75	200	17.63
7	Chloride (as Cl)	mg/L	IS 3025:(Part-32)	250	1000	32.99
8	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
9	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.20
10	Free Residual Chlorine	mg/L	IS 3025:(Part-26)	0.2	1	N.D.
11	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	0.24
12	Magnesium (as Mg)	mg/L	IS 3025:(Part-46)	30	100	7.29
13	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	N.D.





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REPORT NO.: 07134

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
14	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025 (part-34)	45	No Relaxation	5.56
15	Selenium (as Se)	mg/L	IS 3025 (part-56)	0.01	No Relaxation	N.D.
16	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025: (Part-24)	200	400	11.64
17	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-23)	200	600	50.0
18	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-21)	200	600	74.0
19	Zinc (as Zn)	mg/L	IS 3025 (part-49)	5	15	N.D.
20	Chemical Oxygen Demand	mg/L	IS:3025: (Part-58):2006, RA 2012	-	-	12.8
21	Bio-chemical Oxygen Demand at 27°C for three day	mg/L	IS:3025: (Part-44):1993 RA 2014	-	-	2.2
22	Dissolved oxygen as DO	Mg/L	IS:3025: (Part-44):1993 RA 2014	-	-	4.9
<b>C. Parameters concerning toxic substances: -</b>						
1	Cadmium (as Cd)	mg/L	IS 3025 (part-41)	0.003	No Relaxation	N.D.
2	Lead (as Pb)	mg/L	IS 3025 (part-47)	0.01	No Relaxation	N.D.
3	Mercury (as Hg)	mg/L	IS 3025 (part-48)	0.001	No Relaxation	N.D.
4	Nickel (as Ni)	mg/L	IS 3025 (part-54)	0.02	No Relaxation	N.D.
5	Arsenic (as As)	mg/L	IS 3025 (part-37)	0.01	0.05	N.D.
6	Chromium (as Cr)	mg/L	IS 3025 (part-52)	0.05	No Relaxation	N.D.
<b>F. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml Sample		26.0
2	E. Coli	MPN/100ml	IS: 1622:1981:RA:2019			13.0

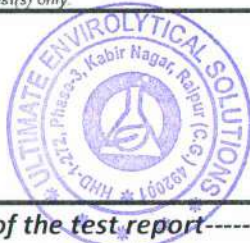
Note: mg/lit.: milligram per liter, N.D.: Not Detected.

**REMARKS: RESULTS ARE AS ABOVE**

### Terms & conditions

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- This is for information as the party has asked for above test(s) only.

*Komal Kumar*  
07/02/23  
**KOMAL KUMAR**  
(SR. CHEMIST)  
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

*Abhijeet Pandey*  
**ABHIJEET PANDEY**  
(DY. QUALITY MANAGER)  
AUTHORIZED SIGNATORY

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





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<b>Name &amp; Address Of The Customer</b> <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/22-23/07135	
		LAB REF NO.	UES/22-23/W/014943	
		DATE OF SAMPLING	23/01/2023	
		DATE OF RECEIPT	24/01/2023	
		DATE OF REPORT	27/01/2023	
		DATE OF ANALYSIS	START: 24/01/2023	END : 27/01/2023
<b>SAMPLE DETAILS</b>				
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.: 07135

### TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A	Organoleptic & Physical Parameters					
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(Part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.4°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	6.64
4	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025:(Part-10)	1	5	0.74
6	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	88.0
B	General Parameters concerning substances undesirable in excessive amounts					
1	Aluminium (as Al)	mg/L	IS 3025(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS 3025(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025:(Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025:(Part-40)	75	200	16.83
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS 3025:(Part-26)	4.0	No Relaxation	N.D.
8	Chloride (as Cl)	mg/L	IS 3025:(Part-32)	250	1000	18.99





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REPORT NO.: 07135

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.07
11	Free Residual Chlorine	mg/L	IS 3025:(Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	0.13
13	Magnesium (as Mg)	mg/L	IS 3025:(Part-46)	30	100	4.37
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	N.D.
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	1.74
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025:(Part-24)	200	400	12.24
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025:(Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-23)	200	600	40.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-21)	200	600	60.0
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.



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REPORT NO.: 07135

### TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.
8	Polynuclear aromatic hydrocarbons (as PAH)	mg/L	APHA 6440	0.0001	No Relaxation	N.D.
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	IS 3025(part-52)	0.05	No Relaxation	N.D.
11	Trihalomethanes:					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
12	Total Coliform	MPN/100ml	IS: 1622:1981:RA:2019	-	-	Absent
13	E. Coli	MPN/100ml	IS: 1622:1981:RA:2019	-	-	Absent

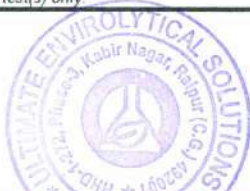
Note: mg/lit.: milligram per liter, N.D.: Not Detected.

#### REMARKS: RESULTS ARE AS ABOVE

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*K. Kumar*  
27/01/23  
**KOMAL KUMAR**  
(SR. CHEMIST)  
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

*Abhijeet Pandey*  
**ABHIJEET PANDEY**  
(DY. QUALITY MANAGER)  
AUTHORIZED SIGNATORY

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





HDD-272, Phase III - Near JP Chowk  
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Name & Address Of The Customer		REPORT NO.	UES/TR/22-23/07022	
<b>TO,</b> <b>M/s Metabodeli Iron Ore Mine – 25 Ha</b> <b>Tahsil – Pakhanjur, Dist. – Kanker (C.G.)</b>		LAB REF NO.	UES/22-23/AAQM/014773-014776	
		DATE OF SAMPLING	15/12/2022	
		DATE OF RECEIPT	16/12/2022	
		DATE OF REPORT	20/12/2022	
		DATE OF ANALYSIS	START:16/12/2022	END:20/12/2022
<b>SAMPLE DETAILS</b>				
Monitoring For	Ambient Air Quality Monitoring			
Sampling Location	1. Near Security Shed - N			
	2. Near Weigh Bridge - W			
	3. Near Temporary Store - S			
	4. Near CAF Camp - E			
Customer Ref. No. & Date	4200001168, DATED - 09/06/2022			
Duration Of Sampling	As per CPCB norms			
Sample Collected by	Laboratory Chemist			
Sampling Procedure	As Per Method Reference			
Sample Quantity/Packing	Filter Paper (PM10): 1X1 No., Filter Paper (PM2.5): 1X1 No. SO2: 30mlX1 No. PVC Bottle, NO2: 30mlX1 No. PVC BOTTLE, Rubber Bladder: 1X1 No., C6H6: CHARCOAL Tube. OZONE: 10MLX1 No. Brown PVC Bottle, NH4:10MLX1 No. Brown PVC Bottle			

### TEST REPORT

Parameter	Unit	NAAQM Standard	METHOD REFERENCE	Results			
				Near Security Shed - N	Near Weigh Bridge - W	Near Temporary Store - S	Near CAF Camp - E
Particulate Matter size less than 10 microns (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	IS 5182(Part 23):2006 & CPCB Guidelines Vol.-I	46.8	42.6	48.9	43.2
Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	IS 5182(Part 24):2019 CPCB Guidelines Vol.-I	34.9	31.4	36.2	33.5
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	IS 5182(Part 2):2001, RA 2006 & CPCB Guidelines Vol.-I	7.8	9.2	11.4	6.2
Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	IS 5182(Part 6): 2006 & CPCB Guidelines Vol.-I	12.8	14.9	16.4	12.4
Carbon Monoxide (CO)	mg/m <sup>3</sup>	4.0	IS 5182(Part 10):1999, RA 2003	0.38	0.32	0.46	0.40
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	CPCB Guidelines Vol-I	12.2	8.8	8.2	10.8
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	CPCB Guidelines Vol-I	4.2	6.6	4.8	3.9
Arsenic (As)	ng/m <sup>3</sup>	6.0	CPCB Guidelines Vol-I and AAS Method	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)	ng/m <sup>3</sup>	20	CPCB Guidelines Vol-I and AAS Method	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	µg/m <sup>3</sup>	1.0	CPCB Guidelines Vol-I and AAS Method	N.D.	N.D.	N.D.	N.D.
Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	5.0	IS 5182 (Part 11):2006	N.D.	N.D.	N.D.	N.D.
Benzo(a) Pyrene	ng/m <sup>3</sup>	1.0	IS 5182 (Part 12):2014	N.D.	N.D.	N.D.	N.D.

Note: N.D.: Not Detected.

**REMARKS: RESULTS ARE AS ABOVE**

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- This is for information as the party has asked for above-test(s) only.

20/12/22  
**KOMAL KUMAR**  
 (SR. CHEMIST)  
 REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

**ABHIJEET PANDEY**  
 (DY. QUALITY MANAGER)  
 AUTHORIZED SIGNATORY

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

AN ISO : 9001:2015 / ISO: 14001:2015 / ISO 45001:2018 CERTIFIED LABORATORY





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Name & Address of The Customer		REPORT NO.	UES/TR/21-23/07023
TO, M/s Metabodeli Iron Ore Mine – 25 Ha Tahsil – Pakhanjur, Dist. – Kanker (C.G.)		LAB REF NO.	UES/22-23/N/014777-014780
		DATE OF REPORT	20/12/2022
		DATE OF SAMPLING	15/12/2022 to 16/12/2022
<b>SAMPLE DETAILS</b>			
MONITORING FOR	NOISE LEVEL MONITORING		
CUSTOMER REF. NO. & DATE	4200001168, DATED - 09/06/2022		
SAMPLING LOCATION	(AS DESCRIBED BELOW)		
SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	IS 9989:1981:RA 2001		

TEST REPORT				
LOCATION	UNIT	RESULT	LIMIT (RESIDENTIAL ZONE)	
		DAY TIME	DAY TIME	NIGHT TIME
NEAR SECURITY SHED - N	dB(A)	51.4	75 dB(A)	70 dB(A)
NEAR WEIGH BRIDGE - W	dB(A)	52.6		
NEAR TEMPORARY STORE - S	dB(A)	54.2		
NEAR CAF CAMP - E	dB(A)	56.8		

REMARKS: RESULTS ARE AS ABOVE. MINING OPERATION IS CARRIED OUT ONLY IN DAY TIME.

*Terms & conditions*

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- This is for information as the party has asked for above test(s) only.

 20/12/22 KOMAL KUMAR (SR. CHEMIST) REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  ABHIJEET PANDEY (DY. QUALITY MANAGER) AUTHORIZED SIGNATORY
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-----End of the test report-----





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<b>Name &amp; Address Of The Customer</b>		<b>REPORT NO</b>	UES/TR/22-23/07024	
<b>TO,</b>		<b>LAB REF NO</b>	UES/22-23/FE/014781-014785	
<b>M/s Metabodeli Iron Ore Mine – 25 Ha</b>		<b>DATE OF SAMPLING</b>	15/12/2022	
<b>Tahsil – Pakhanjur, Dist. – Kanker</b>		<b>DATE OF RECEIPT</b>	16/12/2022	
<b>(C.G.)</b>		<b>DATE OF REPORT</b>	20/12/2022	
		<b>DATE OF ANALYSIS</b>	START: 16/12/2022	END: 20/12/2022
<b>SAMPLE DETAILS</b>				
<b>Monitoring For</b>	Work Zone Monitoring / Fugitive Emission Monitoring			
<b>Customer Ref. No. &amp; Date</b>	4200001168, DATED - 09/06/2022			
<b>Duration Of Sampling</b>	8 Hours			
<b>Sample Collected By</b>	Laboratory Chemist			
<b>Sampling Procedure</b>	As Per Method Reference			
<b>Sample Quantity/Packing</b>	GMF Filter Paper (8 X 10 Inch): 1x1 No.			

TEST REPORT				
Parameter	Unit	Result (SPM)	The Environment (Protection) Rules, 1986 Standard	Method Reference
Near Crushing & Screening	µg/m <sup>3</sup>	1718	2000	EPA Method IO-2.1
Ore Storage & Loading Area	µg/m <sup>3</sup>	1406		
Service Road	µg/m <sup>3</sup>	1059		
Mining Face / Benches	µg/m <sup>3</sup>	1278		
Waste Dump Area	µg/m <sup>3</sup>	1401		

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 20/12/22 <b>KOMAL KUMAR</b> (SR. CHEMIST) REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  <b>ABHIJEET PANDEY</b> (DY. QUALITY MANAGER) AUTHORIZED SIGNATORY
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-----End of the test report-----





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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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<b>Name &amp; Address Of The Customer</b> <b>TO,</b> <b>M/s Metabodeli Iron Ore Mine – 25 Ha</b> <b>Tahsil – Pakhanjur, Dist. – Kanker (C.G.)</b>		REPORT NO.	UES/TR/22-23/07025
		LAB REF NO.	UES/22-23/W/014786
		DATE OF SAMPLING	15/12/2022
		DATE OF RECEIPT	16/12/2022
		DATE OF REPORT	20/12/2022
		DATE OF ANALYSIS	START: 16/12/2022    END: 20/12/2022
<b>SAMPLE DETAILS</b>			
Customer Sample Id / Sampling Location	Metabodeli 25 ha Mine Office	Customer Ref. No. & Date	4200001168, DATED - 09/06/2022
Sample Type	Drinking 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.: 07025

### 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	7.28
3	Total Suspended Solids	mg/L	IS:3025:(Part-17)	-	-	N.D.
4	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	138
5	Chloride (as Cl)	mg/L	IS 3025:(Part-32)	250	1000	13.9
6	Turbidity	NTU	IS 3025:(Part-10)	1	5	0.30
7	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-23)	200	600	46.0
8	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-21)	200	600	68.0
9	Calcium (as Ca)	mg/L	IS 3025:(Part-40)	75	200	15.63
10	Magnesium (as Mg)	mg/L	IS 3025:(Part-46)	30	100	7.04
11	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025:(Part-24)	200	400	2.54
12	Sodium (as Na)	mg/L	APHA 22 <sup>nd</sup> Edition	-	-	8.9
13	Fluoride (as F)	mg/l	IS 3025(part-60)	1	1.5	0.26
14	Nitrate (as NO <sub>3</sub> )	mg/l	IS 3025(part-34)	45	No Relaxation	0.68
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	0.19
18	Zinc (as Zn)	mg/l	IS 3025(part-49)	5	15	N.D.





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REPORT NO.: 07025

### TEST REPORT

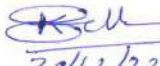
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
19	Chemical Oxygen Demand (COD)	mg/l	IS 3025(part-58)	-	-	N.D.
20	Biochemical Oxygen Demand (BOD) for 3 days at 27°C	mg/l	IS:3025: (Part-44)	-	-	N.D.
21	Nickel (as Ni)	mg/l	IS:3025: (Part-54)	0.02	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**


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20/12/22  
**KOMAL KUMAR**  
(SR. CHEMIST)  
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

  
**ABHIJEET PANDEY**  
(DY. QUALITY MANAGER)  
AUTHORIZED SIGNATORY

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





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Name & Address Of The Customer		REPORT NO	UES/TR/22-23/07026	
<b>TO,</b> <b>M/s Metabodeli Iron Ore Mine – 25 Ha</b> <b>Tahsil – Pakhanjur, Dist. – Kanker (C.G.)</b>		LAB REF NO	UES/22-23/ST/014787	
		DATE OF SAMPLING	15/12/2022	
		DATE OF RECEIPT	16/12/2022	
		DATE OF REPORT	20/12/2022	
		DATE OF ANALYSIS	START:16/12/2022	END:20/12/2022
<b>SAMPLE DETAILS</b>				
Monitoring For	DG Stack Emission Monitoring			
Customer Ref. No.	4200001177, DATED - 10/06/2022			
Sampling Location	DG SET 125 KVA			
Sample Collected By	Laboratory Chemist			
Sampling Procedure	Is 11255 Part 1,2:1985 Reaffirmed 2009; Part 3:2008, Part 7:2005 Reaffirmed 2012,			
Sample	Thimble: 1 X 1 No., SO <sub>2</sub> : 30 ml X 1 No. PVC Bottle, NO <sub>x</sub> : 25 ml X 1 NO. PVC Bottle, Rubber			
Quantity/Packing	Bladder: 1 X 1 No.,			

### TEST REPORT

#### Stack details

Stack Identity	DG set 125 KVA			
Stack attached to	Generator 125 KVA			
Material of construction	MS Plate			
Stack height above ground level	10 meter			
Stack diameter	0.10 Meter			
Stack shape at top	Circular			
Type of fuel	Diesel			
Parameter	Unit	Result	Limit	Method Reference
Flue gas Temperature	°C	147	-	IS 11255 (Part 3):2008
Flue gas velocity	m/s	11.5	-	IS 11255 (Part 3):2008
Total gas quantity	Nm <sup>3</sup> /h	230.6	-	IS 11255 (Part 3):2008
Total Particulate Matter (PM) (Corrected at 15 % O <sub>2</sub> )	g/kw-h	0.060	<0.2	IS 11255 (Part 1):1985, RA 2003
Sulphur Dioxide (SO <sub>2</sub> )	g/kw-h	1.01	-	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen (NO <sub>x</sub> )(Corrected at 15 % O <sub>2</sub> ) Dry Basis	g/kw-h	0.78	<4.0	IS 11255 (Part 7):2005, RA 2012
Non-Methane hydrocarbon (NMHC) (Corrected at 15 % O <sub>2</sub> )	g/kw-h	0.38	<4.0	APHA METHOD 109, P-259
Carbon Monoxide (CO)	g/kw-h	0.59	<3.5	APHA METHOD 130, P-359

#### REMARKS: RESULTS ARE AS ABOVE

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 20/12/22 <b>KOMAL KUMAR</b> (SR. CHEMIST) REVIEWED BY	 For ULTIMATE ENVIROLYTICAL SOLUTIONS	 <b>ABHIJEET PANDEY</b> (DY. QUALITY MANAGER) AUTHORIZED SIGNATORY
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-----End of the test report-----





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Name & Address Of The Customer		REPORT NO	UES/TR/22-23/07027	
TO, M/s Metabodeli Iron Ore Mine – 25 Ha Tahsil – Pakhanjur, Dist. – Kanker (C.G.)		LAB REF NO	UES/22-23/ST/014788	
		DATE OF SAMPLING	15/12/2022	
		DATE OF RECEIPT	16/12/2022	
		DATE OF REPORT	20/12/2022	
		DATE OF ANALYSIS	START:16/12/2022	END:20/12/2022
<b>SAMPLE DETAILS</b>				
Monitoring For	DG Stack Emission Monitoring			
Customer Ref. No.	4200001177, DATED - 10/06/2022			
Sampling Location	DG SET 160 KVA			
Sample Collected By	Laboratory Chemist			
Sampling Procedure	Is 11255 Part 1,2:1985 Reaffirmed 2009; Part 3:2008, Part 7:2005 Reaffirmed 2012,			
Sample	Thimble: 1 X 1 No., SO <sub>2</sub> : 30 ml X 1 No. PVC Bottle, NO <sub>x</sub> : 25 ml X 1 NO. PVC Bottle, Rubber			
Quantity/Packing	Bladder: 1 X 1 No., Hg: 500ml X 1 No. Glass Bottle & 500ml X 3 NO. PVC Bottle.			

### TEST REPORT

#### Stack details

Stack Identity	DG set 160 KVA
Stack attached to	Generator 160 KVA
Material of construction	MS Plate
Stack height above ground level	12.0 Meter
Stack diameter	0.11 Meter
Stack shape at top	Circular
Type of fuel	Diesel

Parameter	Unit	Result	Limit	Method Reference
Flue gas Temperature	°C	158	-	IS 11255 (Part 3):2008
Flue gas velocity	m/s	13.2	-	IS 11255 (Part 3):2008
Total gas quantity	Nm <sup>3</sup> /h	312.1	-	IS 11255 (Part 3):2008
Total Particulate Matter (PM) (Corrected at 15 % O <sub>2</sub> )	g/kw-h	0.069	<0.2	IS 11255 (Part 1):1985, RA 2003
Sulphur Dioxide (SO <sub>2</sub> )	g/kw-h	1.02	-	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen (NO <sub>x</sub> )(Corrected at 15 % O <sub>2</sub> ) Dry Basis	g/kw-h	0.64	<4.0	IS 11255 (Part 7):2005, RA 2012
Non-Methane hydrocarbon (NMHC) (Corrected at 15 % O <sub>2</sub> )	g/kw-h	0.43	<4.0	APHA METHOD 109, P-259
Carbon Monoxide (CO)	g/kw-h	0.45	<3.5	APHA METHOD 130, P-359

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 20/12/22 <b>KOMAL KUMAR</b> (SR. CHEMIST) REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  <b>ABHIJEET PANDEY</b> (DY. QUALITY MANAGER) AUTHORIZED SIGNATORY
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-----End of the test report-----





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Name & Address Of The Customer		REPORT NO	UES/TR/22-23/07028	
TO, M/s Metabodeli Iron Ore Mine – 25 Ha Tahsil – Pakhanjur, Dist. – Kanker (C.G.)		LAB REF NO	UES/22-23/ST/014789	
		DATE OF SAMPLING	15/12/2022	
		DATE OF RECEIPT	16/12/2022	
		DATE OF REPORT	20/12/2022	
		DATE OF ANALYSIS	START:16/12/2022	END:20/12/2022
<b>SAMPLE DETAILS</b>				
Monitoring For	DG Stack Emission Monitoring			
Customer Ref. No.	4200001177, DATED - 10/06/2022			
Sampling Location	DG SET 500 KVA			
Sample Collected By	Laboratory Chemist			
Sampling Procedure	Is 11255 Part 1,2:1985 Reaffirmed 2009; Part 3:2008, Part 7:2005 Reaffirmed 2012,			
Sample	Thimble: 1 X 1 No., SO <sub>2</sub> : 30 ml X 1 No. PVC Bottle, NO <sub>x</sub> : 25 ml X 1 NO. PVC Bottle, Rubber			
Quantity/Packing	Bladder: 1 X 1 No., Hg: 500ml X 1 No. Glass Bottle & 500ml X 3 NO. PVC Bottle.			

### TEST REPORT

#### Stack details

Stack Identity	DG set 500 KVA
Stack attached to	Generator 500 KVA
Material of construction	MS Plate
Stack height above ground level	10 meter
Stack diameter	0.2 meter
Stack shape at top	Circular
Type of fuel	Diesel

Parameter	Unit	Result	Limit	Method Reference
Flue gas Temperature	°C	150	-	IS 11255 (Part 3):2008
Flue gas velocity	m/s	12.1	-	IS 11255 (Part 3):2008
Total gas quantity	Nm <sup>3</sup> /h	963.6	-	IS 11255 (Part 3):2008
Total Particulate Matter (PM) (Corrected at 15 % O <sub>2</sub> )	g/kw-h	0.062	<0.2	IS 11255 (Part 1):1985, RA 2003
Sulphur Dioxide (SO <sub>2</sub> )	g/kw-h	0.98	-	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen (NO <sub>x</sub> )(Corrected at 15 % O <sub>2</sub> ) Dry Basis	g/kw-h	0.75	<4.0	IS 11255 (Part 7):2005, RA 2012
Non-Methane hydrocarbon (NMHC) (Corrected at 15 % O <sub>2</sub> )	g/kw-h	0.32	<4.0	APHA METHOD 109, P-259
Carbon Monoxide (CO)	g/kw-h	0.46	<3.5	APHA METHOD 130, P-359

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

# JAYASWAL NECO INDUSTRIES LTD

CIN : L28920MH1972PLC016154

(STEEL PLANT DIVISION)

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

PH. : +91-7721-264241, 264263 FAX : +91-7721-264279, 264240 Email : spd@necoindia.com



**JNIL/ENV/Met25/2023/12**

**Date : 05/01/2023**

**The Regional Officer,**  
Chhattisgarh Environment Conservation Board,  
HIG-5 & 6 Aghanpur Housing Board Colony,  
Chitrakoat Road, Jagdalpur,  
(Chhattisgarh).

**Sub :** Submission of Plantation details for the year "**2022**" & target of plantation "**2023**" of Metabodeli Iron Ore Mine (25 Ha.), Village-Metabodeli, Tehsil-Pakhanjur, District-Kanker (Chhattisgarh).

**Ref :** Your letter vide No.1303/R.O./Tech./CECB/2022 Jagdalpur Dated.28/12/2022.

Sir,

With reference to the subject cited above, we would like to inform you that total 1000 Nos. of saplings had been planted in the year, 2022 of Metabodeli Iron Ore Mine(25 Ha.), Village-Metabodeli, Tehsil-Pakhanjur, District-Kanker(Chhattisgarh) & the Proposed Plantation target in the year "**2023**" will be **1000 Nos.** details in **Annexure – I.** Plantation saplings photographs attached here with for your reference please.

Thanking you,

Yours faithfully,  
**for Jayaswal Neco Industries Ltd.**

**Susanta Kumar Moitra**  
**Associate Director**

**Encl : As above.**



**Annexure-1****Regional Office, Chhattisgarh Environmental Conservation Board,****Jagdalpur, District-Bastar(C.G.).****" Information on tree planting done under Harihar Chhattisgarh****Tree Plantation Programme - 2022 "**

S. No.	Industry Name / Organization Name	Area of Industry / Mine in Acre)	Industry/Area to be planted in the mine / Plantation as per consent condition /Area of Plantation in acres as per Environmental Clearance.	Industry / Actual area of Plantation done in the mine (in Acres)	Industry / Total number of actual tree plantation done in the mine	Remarks
1	Metabodeli Iron Ore Mine, District-Kanker(C.G.). M/s Jayaswal Neco Industries Ltd.	61.75	Safety zone/ gap plantation in 2.0 Ha	4.94	1000 Nos.	--

**Information on Proposed Plantation targets under "Harihar Chhattisgarh****Tree Plantation Programme -2023"**

S.N o.	Industry Name/ Organisation Name	Plantati on Target Nos.	Type of Plantation trees according to the target	Description of the proposed site for Plantation				
				District Name	Mining area in (Acres)	Other area in (Acre s)	Potential Planting time	Survival Rate %
1	Metabodeli Iron Ore Mine, District-Kanker(C.G.). M/s Jayaswal Neco Industries Ltd.	1000	Karanj, Black Sirus, White Sirus, Arjun, Mango	Kanker (C.G.)	2	-	3-4 Months	-







