SIX MONTHLY EC COMPLIANCE REPORT

SURJAGARH IRON ORE MINES
LLOYDS METALS & ENERGY LTD.

LLOYDS METALS & ENERGY LTD.
SURJAGARH IRON ORE MINES
SURJAGARH, ETAPALI, GADCHIROLI, MAHAARASHTRA
http://www.lloyds.in/

NAME OF THE PROJECT:

SURJAGARH IRON ORE MINES

LLOYDS METALS & ENERGY LTD.

CLEARANCE LETTER NO. & DATE:

Ministry's Clearance letter no. J-11015/348/2005.IA (M)dated 29.05.2006 for 3.00 Million TPA Iron Ore Production

PERIOD OF COMPLIANCE REPORT:

October 2021 to March 2022

LLOYDS METALS

Lloyds Metals and Energy Limited

Regd. Office : Plot No. A 1-2, MIDC Area, Ghugus, Dist. Chandrapur, 442 505, Maharashtra. Tel. 07172 285099 /103/398 Fax 07172 285003.
Corporate Office : Madhu Estate, A2, 02nd Floor. PandurangBudhkar Marg, Worli, Mumbai 400013. Tel.No. 022-6291 8111. Fax No. 022- 6291 8260
CIN: L40300MH1977PLC019594 Website :www.lloyds.inEmail: investor@lloyds.in

REF. NO: SIOM/ENV/186/2022 DATE: 23/05/2022

To

Deputy Director General of Forests (C),
Ministry of Env., Forest and Climate Change,
Integrated Regional Office, Ground Floor,
East Wing, New Secretariat Building, Civil Lines,
Nagpur- 440001.

Sub: Submission of Environmental Clearance compliances stipulated in approved EC for iron ore production of 3.0 Million TPA in respect of Surjagarh Iron Ore Mines of M/s. Lloyds Metal & Energy Ltd.

Reference:-

1. Ministry's Clearance letter no. J-11015/348/2005.IA (M)dated 29.05.2006 for 3.00 Million TPA Iron Ore Production.

2. MoEF&CC notification no. 4624 (Published in Gazette of India) Dt. 26.11.2018.

Dear Sir,

With reference to the above cited subject and gazette notification, we are submitting herewith the six monthly EC compliance report in soft copy by E–mail i.e. apccfcentral-ngp-mef@gov.in and also uploading the same in our company website for 3.00 Million TPA Iron ore production with comprehensive data analysis reports (supporting photographs and monitoring reports) for the period October 2021 to March 2022 in respect of Surjagarh Iron Ore Mines of M/s. Lloyds Metal & Energy Ltd.

Thanking you.

Yours faithfully,

For Surjagarh Iron Ore Mines of M/s. Lloyds Metal & Energy Ltd.

23/05/2022
Mines Manager

Enclosures : As above & Compliance Copy with detailed analysis report and supporting photographs and monitoring data.

Copy to:

1. **The Regional Directorate,**
   Central Pollution Control Board,
   Survey No. 110, Dhankude Multi-Purpose Hall, Baner Road, Baner,
   Pune – 411045
   Email – rdpune.cpcb@gov.in

2. **The Chairman,**
   Maharashtra State Pollution Control Board,
   Kalpataru Point, 3rd & 4th Floors
   Sion Mutunga Scheme, Rod no. 6,
   Opp. Cine Planet, Sion(E), Mumbai-400022
   Email - ms@mpcb.gov.in

3. **The Regional Director,**
   Central Ground Water Board,
   Central Region, N.S. Building, Civil Lines,
   Nagpur – 440001
   Email - rdcr-cgwb@nic.in

Compliance Report for the condition in the Environmental Clearance No. J-11015/348/2005.IA (M) dated 29.05.2006 Issued by Ministry of Environment and Forest, New Delhi for Surjagarh (Worria Hill) Iron Ore Mine of Lloyds Metals & Energy Ltd, Etapalli Taluka, / Gadchiroli District of Maharashtra Period from October, 2021 to March, 2022.

Specific Conditions:

Sr.No	Conditions	Compliance Status
(i)	The mining operations shall not intersect groundwater table. Prior approval of the ministry of Environmental & Forest and Central Ground water authority shall be obtained for mining below water table.	➢ The present mining operation is restricted to above the ground water table and there is no proposal to intersect the ground water table as per the approved Scheme of Mining. ➢ The Project has carried out detailed hydrology study and as per hydrology study report; the ground water table exists at 260 aMSL (pre monsoon) and present mine working operation is restricted at 600 aMSL.
(ii)	A wildlife management plan clearly showing safeguards and management interventions for the area shall be prepared and got vetted by Wildlife Institute of India and duly implemented in the project. The cost of preparation and implementations of wildlife management plan shall be borne by the proponent and included as project cost.	➢ The Wildlife Management & Safety Plan is prepared by WII and the same has been approved by the Indian Wildlife Institute, Dehradun vide letter no. WII-EIA(AR) /Gadchiroli-2005 dated 23-10-2006. ➢ An amount of Rs.53,25,440/- vide DD no.143677 dated 03.07.2007 deposited in favour of Dy. Conservator of Forests, Bhamragarh to this effect. The proponent has given an undertaking that user agency will bear the cost of implementation of Wildlife Management Plan (WMP).
(iii)	Float ore area shall be completely backfilled concurrently and reclaimed by top soil. Backfilling shall start from 6th year onwards.	➢ We are abiding by the said condition and following the mining operations as per the approved mining plan duly approved by Indian Bureau of Mines, GoI. Accordingly, there is no such proposal of back filling from 2022-23 to 2026-27.
(iv)	Use of ripper dozer as an alternate technology to avoid blasting & ground vibrations shall be explored and adopted to the extent possible.	➢ Ripper dozer is being used on regular basis for rock breaking instead of blasting in the mines, however as on required, blasting is being is carried for which DGMS approval is obtained by the project proponent.

(v)	Top soil shall be stacked properly with proper slope with adequate measure and should be used for reclamation and rehabilitation of mined out area.	➢ Its being followed and area is marked for top soil stacking and the same is being used for plantation and coir matting purposes. ➢ Necessary safeguard measures are under taken to preserve its nutrients values, so that it will be used for future land reclamation and raising of plantations.
(vi)	There shall be no external overburden dumps. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self sustaining Compliance status should be submitted to the ministry of Environment and Forest on six monthly basis.	➢ There is no such proposal of external OB dump. Presently whatever the waste is generated its being stacked inside the mines lease area and proper environmental safeguard measures are being followed with Proper terracing, slope level and sub benches are maintained in all mines waste / sub grade dump. Bottom of the sub-grade dump provided / constructed with adequate size of retention wall to avoid the dump failure during monsoon period. **Table # 1**.
(vii)	Catch drains & siltation ponds of appropriate size should be constructed to arrest silt and sediment flow from soil, temporary dumps and mineral dumps. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drain should be regularly desilted particularly after monsoon maintained properly. Garland drain shall be constructed for mine pit and temporary dumps & sump should be designed keeping 50% safety margin over and above peak sudden rainfall and maximum discharge in the area adjoining the mine site.	➢ The project has constructed catch drains and siltation pits at the strategic locations of the mines and the total mines run off being channelized to the mines pit only. The above said structures are also de-silted from time to time. **Table # 2**
viii)	Dimension of retaining wall at the toe of dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.	➢ The project has constructed 240 M length of retaining wall with gabion box around the dump areas having dimension of W-1M x H-1M to check mines run off. **Table # 2.**
ix)	Plantation shall be raised in an area of 342.29 ha including a green belt of 5.8 ha around area, mineral separation	➢ We are abiding by the said condition and planation over 342.29 ha will be carried at the time of conceptual period of the

	plant, roads etc by planting the native species in consultations with the local DFO/Agriculture department. The density of the trees should be around 2500 plants per ha.	mines. ➢ However, the project has planted a number of saplings inside ML and safety zone areas. The plant species are also being selected in consultation with local Forest Officials.
x)	The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	➢ The project has implemented gabion box retention walls around the dumps, check weirs and settling ponds at the strategic locations for surface run off management and settling cum harvesting pits for water conservation measures. **Table # 2.**
xi)	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing well and constructing new piezometers during the mining operations. The monitoring should be carried out four times in a year –Pre monsoon (April-May) Monsoon (August) and winter (January) and the data thus collected may be sent regularly to the MOEF. Central Ground Water Authority and Regional Director Central Ground Water Board.	➢ Groundwater quality and water level is being monitored on seasonal basis and the analysis reports are being submitted to the concerned authorities at regular intervals. Its also found that, all the tested parameters are very well within the prescribed norms. **Annexure # 1.**
xii)	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, CGWB.	➢ Rain water harvesting plan has already been made and the same is being implemented inside the ML area.
xiii)	Permission from the competent authority should be obtained for drawl of water from the river.	➢ The project has obtained the ground water NOC permission from CGWA, New Delhi for with drawl of 95 KLD of ground water. **Annexure # 2.**
xiv)	Suitable embankment of proper dimension should be constructed to protect the area from flood water during rainy season.	➢ Not Applicable as the area is in a hilly terrain, there is no such occurrence of the flood in this area. However, we are abiding by the said condition and the project has implemented gabion box retention walls around the dumps, check weirs and settling ponds at the strategic locations for surface run off management and settling cum harvesting pits for water conservation measures.
xv)	Appropriate mitigative measures should be taken to prevent pollution of Bandia river in consultation with the State	➢ We are abiding by the said condition and the project has implemented gabion box retention walls around the dumps, check

	Pollution Control Board	weirs and settling ponds at the strategic locations for surface run off management and settling cum harvesting pits for water conservation measures & further prevention measures for protection of Bandia River.
xvi)	Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operation and in transportation of mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded.	➢ Proper maintenance and regular monitoring of each and every vehicle is being carried to meet the air and noise pollution norms. Regularly PUC checks are being carried. ➢ The noise quality monitoring is carried on regular basis to ascertain the noise level within the norms. ➢ Shift working is implemented to avoid noise exposure besides these earmuffs and earplugs are provided to the workers. ➢ Proper enclosures are also installed near the noise generating equipment's. ➢ The vehicles transporting Iron ore materials are covered with tarpaulin.
xvii)	The project authorities should undertake sample survey to generate data on pre project community health status within a radius of 1 km from proposed mine.	We are abiding by the said condition.
xviii)	Blasting operation should be carried out only during the day time. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	➢ Ripper dozer is being used on regular basis for rock breaking instead of blasting in the mines, however as on required, controlled blasting is being is carried for which DGMS approval is obtained by the project proponent to carry out the blasting activity inside the ML area. ➢ Blasting monitoring is being carried on regular basis.
xix)	Drills should be wet operated or operated with dust extractors.	➢ The drilling operation is being carried out with both dust extractor and water injection system. Presently the project is using excavator mounted drill machine for drilling operation. The said drilling machine is inbuilt with both water injection system and dust extraction systems. The photo evidence for the same is given below.

xx)	Water sprinkling system shall be provided to check fugitive emissions from ancillary operations such as crushing, screening plant etc.,	➢ High pressure water mist sprinkling systems are installed in all mineral handling units for dust suppression purposes. **Table # 3.**
xxi)	Consent to operate should be obtained from SPCB before starting production from the mine.	➢ Consent to operate has been obtained from Maharashtra Pollution Control Board (MPCB) for iron ore production of 3.0 Million TPA. **Annexure # 3**
xxii)	Sewage treatment plant should be installed for the colony. ETP should provided for workshop and mineral separation plant wastewater.	➢ No residential colony is present inside the lease area. ➢ The project has installed ETP cum oil & grease trap pit inside workshop area for treatment of workshop effluents.
xxiii)	Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use patterns & report submitted to MOEF and its regional office.	➢ We are abiding by the said condition.
xiv)	A final mine closure plan along with the details of the corpus fund should be submitted to the MOEF 5 years in advance of final mine closure plan for approval.	➢ We are abiding by the said condition as per the approved mining plan and submitted the bank guarantee of INR 736.20 lakhs towards reclamation and rehabilitation of 147.24 ha of mined out & allied activity areas as a part of the management of the mines closure of the project.

General Conditions

<table>
<tr><th>Sr.No</th><th>Conditions</th><th>Compliance status</th></tr>
<tr><td>i)</td><td>No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forest.</td><td>➢ We are carrying out the mining operation as per the approved Mining plan as approved by IBM, GoI with the Mining method having shovels, dumper combinations and sorting and sizing of the Iron Ore.</td></tr>
<tr><td>ii)</td><td>No change in calendar plan including excavation, quantum of mineral iron ore and waste should be made.</td><td>➢ There is no change in the calendar plan, the excavation, quantum of mineral iron ore and waste are being produced as per the approved mining plan/scheme.
<table>
<tr><th>Sl. No.</th><th>Year</th><th>Approved Quantity in MTPA</th><th>Achieved Quantity in MTPA</th></tr>
<tr><td>1.</td><td>2021-22</td><td>3.0</td><td>2.75</td></tr>
<tr><td>2.</td><td>2020-21</td><td>3.0</td><td>0.00</td></tr>
<tr><td>3.</td><td>2019-20</td><td>3.0</td><td>0.0006</td></tr>
</table></td></tr>
<tr><td>iii)</td><td>Conservations measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest department.</td><td>➢ The Wildlife Management & Safety Plan is prepared by WII and the same has been approved by the Indian Wildlife Institute, Dehradun vide letter no. WII-EIA(AR) /Gadchiroli-2005 dated 23-10-2006.
➢ An amount of Rs.53,25,440/- vide DD no.143677 dated 03.07.2007 deposited in favour of Dy. Conservator of Forests, Bhamragarh to this effect. The proponent has given an undertaking that user agency will bear the cost of implementation of Wildlife Management Plan (WMP).</td></tr>
<tr><td>iv)</td><td>Four ambient air quality monitoring stations should be established in the core Zone as well as in the buffer zone for RPM, SPM, SO2, NOx monitoring Locations of the stations should be decided based on the meteorological features and environmentally and ecologically sensitive targets and frequency of monitoring should be</td><td>➢ The monitoring is being carried out by third party accredited NABL laboratory i.e. Star Analytical, Hyderabad. The monitoring of AAQ is being done in the core as well as buffer zone of the ML area, there are 2 no. of monitoring station in core zone & 4 locations in buffer zone of the ML area. The monitoring report for the reporting period reveals that the</td></tr>
</table>

	undertaken in consultation with State Pollution Control Board.	parameters like PM10, PM2.5, SO2, NOx & CO are well within the norm. **Annexure # 4.**
v)	Data on ambient air quality should be regularly submitted to the ministry including its regional office located at Bophal and State Pollution Control Board/ Central pollution control Board once in six months.	➢ Data on ambient air quality (PM10, PM2.5, SO2, NOx, CO) is being submitted once in six monthly basis to Maharashtra Pollution Control Board & concerned authority located at IR Office, MoEF&CC, Nagpur on regular basis.
vi)	Fugitive dust emissions from all the sources should be controlled regularly, Water spraying arrangement on haul roads loading and unloading and at transfer point should be provided and properly maintained	Fugitive Dust are being controlled by the following methods; ➢ Mobile water sprinkling system having water tankers i.e. 6x10 KL & 2x16KL are engaged in the haul road and mines faces towards dust suppression purposes. Time to time maintenance of the same is being carried out. ➢ The project implemented 600 m length of permanent fixed sprinkling system and planned for another length of 2500 M along the mines haul roads, loading and unloading points to suppress the dust generation, for which installation work is under progress. **Annexure # 5.**
vii)	Measures should be taken for control of noise levels below the 85 dB(A) in the work environment. Workers engaged in operations of HEEMM etc. should be provided with ear plug/muffs.	➢ Regular maintenance of HEMM & processing plants is being carried out to minimize the noise level from source. Apart from that, proper PPEs like ear plug, muffles are also provided to employees. ➢ Further, to ensure the noise limit, regular noise monitoring is carried out on regular basis for work zones like crusher plant premises, screen plant premises, ROM loading point, drilling area & work shop. ➢ Regular noise level is being maintained. ➢ Plantation of native species is being developed in phased manner to suppress the noise and dust. ➢ Appropriate personal protective equipment's are provided for the working employees in noise zones. Annexure # 6

viii)	Industrial waste should be properly collected, treated so as to confirm to the standards prescribed under GSR 422(E) dated 19 May 1993 and 31st December 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	➢ The project has installed ETP cum oil & grease trap pit inside workshop area for treatment of workshop effluents. ➢ STP is provided at the employee's base camp for treatment and reuse of the waste domestic water generated from Kitchen, toilet and etc. The treated water is used for plantation and dust suppression activities.
ix)	Personnel working in dusty area should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions to exposure to dust and take corrective measures, if needed.	➢ Workers engaged in Operations are provided with earplugs/muffs, besides this acoustic enclosure for all machine operating cabins are provided. It is being monitored by Noise Level Meter; the results reveals very well within norms. ➢ Initial Medical Examination & Periodical Medical Examination is being carried out to all company & contractor's employees on regular basis. The IME & PME is being carried as per in compliance to Mines Act 1952 & rules 1956 and amendments there to. **Table # 4 & Annexure # 8.**
x)	A separate environment management cell with suitable qualified personnel should be set up under the control of a senior executive, who will report directly to the head of the organization.	➢ We have a separate environment management cell headed by Manager – environment, he is directly under the control of project head to look after the implementation of the various pollution control measures and other Environment Management System requirements. **Annexure # 7.**
xi)	The project authority should inform to the Regional office located at Bhopal regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	➢ We will abide by the said condition by informing to the IRO Office, MoEF&CC located at Nagpur. ➢ The project has implemented different environmental safe guard measures with budgetary cost and recurring cost for protection of same**. Table # 5.**
xii)	The Regional office of this Ministry located at Bhopal shall monitor compliances of the stipulated conditions. The project authorities	➢ We will extend all our cooperation during any such inspections by the Authority of IRO Office, MoEF&CC located at

	should extend full cooperation to the officers of the Regional office by furnishing the requisite data/information/ monitoring reports.	Nagpur.
xiv)	A copy of clearance letter will be marked to concern Panchayat/ Local NGO, if any from whom and suggestion/ representation has been received while processing the proposal.	It has been complied with intimating the letters to concerned authorities and a copy of environmental clearance letter is also made available in the company's website.
xv)	State pollution Control Board should display a copy of the clearance letter at the Regional office, /district Industry Centre & Collectors office/Teshildars office for 30 days	➢ It has been complied.
xvi)	The project authorities should advertise at least in two local newspaper widely circulated, one of which shall be in vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State pollution Control Board and may be also been at web site of the Ministry of Environment and Forest at http:/envfor.nic.in and a copy of the same should be forwarded to the regional office this Ministry located at Bhopal	➢ It has been complied.
xvii)	The Ministry or any competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.	➢ We will abide by the said condition, if any imposed from time to time.
xviii)	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendment and rules.	➢ We are abiding by the said condition

PHOTOGRAPHS

Site Photographs	
Dry Fog System in Mineral Handling plants 	Dry Fog System in Mineral Handling plants 
Settling Pits at the strategic locations 	Settling Pits at the strategic locations 
Coir mat on dump slopes for stabilization and run off management 	Coir mat on dump slopes for stabilization and run off management 

Gabion box type toe wall provided at the bottom of the dump 	
Plantation in mines safety zone area 	Plantation on the celebration of WED, 2022 
Dust suppression by hydraulic tankers inside mines 	Fixed type sprinkling system on main haul roads for dust suppression 

Environmental Monitoring works 	Display of environmental data on electronic display board in front of mines gate 

TABLES

Table # 1
Dump Management Measures

Sl. No	Description of the dump	Location of the dump	Protections Measures
1.	Sub grade dump-1	Near ML Pillar no. 10	- 16000 Sq. M coir mat applied on dump slopes - 120 M length of Gabion box type retention wall - 340 M length garland drain constructed
2.	Sub grade / Fines dump-2	Near ML Pillar no. 6	- 180 M length of Gabion box type retention wall - 210 M length garland drain constructed

Table # 2
Surface run off Management Measures

Sl. No	Particulars	Location	Details
1.	**Check Dam**	Near ML Pillar no. 10	- L-46 M x W-1.2M x H-4.6 M
2.	**Retaining Wall with gabion box**	- Sub grade dump-1 - SG / Fines dump-2	- L-120 M x W-1 M x H-1 M - L-180 M x W-1 M x H-1 M
3.	**Retaining Wall**	- Near Lab Area	- L-80 M x W-1 M x H-1 M
		- Near Office Area	- L-45 M x W-1 M x H-1 M
		- Near Crusher Area	- L-30 M x W-1 M x H-1 M
4.	**Coir Mat Application**	- SG Dump-1 - Office area slope - Times Area Slope	- 16,000 Sq. M - 4,600 Sq. M - 3,200 Sq. M

Table # 3
Dust Suppression Measures

SL. No.	Description	Unit	Quantity	Remarks
1	Automatic Fixed Sprinkler	R.M	600	Mines Haul Road
				Another length of 2500 M fixed sprinkling work under progress
2	Hydraulic pressurized mobile water Tanker	16 KL	3	Mines Benches, Stockyard, plant area, and other mines premises including Village Roads
3	Mobile water tankers	12 KL	6	

Table # 4

IME / PME Status of the Employees

Reporting Period: 2021-22

Particulars	**IME / PME**
Workman	417
Staff	60
Executive / Managerial	8
TOTAL	**485**

Table # 5

Annual Environmental Cost, 2021-22

Sl. No.	Particulars	Capital Cost in Rs.	Recurring Cost in Rs.
1.	**Air Environment**		
2.	Dry Fog System in Mineral Handling Plants	**27,60,110**	**-**
3.	Fixed Sprinkling System for Haul Roads	**11,93,387**	**-**
4.	Water Sprinkling by Tankers	**-**	**8,00,000**
5.	Plantation inside Mines	**-**	**3,50,000**
6.	**Water Environment**		
7.	Check Dam / Check Weir	**14,50,000**	**-**
8.	Garland drain	**-**	**4,28,000**
9.	Settling Pond	**-**	**3,44,000**
10.	Sewage Treatment Plant-STP (100 KLD)	**12,00,000**	**-**
11.	**Dump Management**		
12.	Coir Mat Application on dump slopes	**12,81,000**	**4,50,000**
13.	Gabion Box type Retaining Wall	**5,42,800**	**3,06,400**
14.	**Environmental Monitoring**		
15.	Air, Water, Noise, STP, Fugitive Dust	**-**	**13,98,158**
16.	**Environmental Instruments & AMC, Calibration**		
17.	Electronic Display Board	**3,36,300**	**-**
18.	Piezometer	**1,97,060**	**-**
19.	RDS, AWS	**3,47,729**	**-**
20.	**Misc. Works**		
21.	ISO Certification of Mines	**2,89,100**	
22.	Awareness Program - World Envt. Day, Forest Day etc.	**-**	**1,75,871**
23.	**TOTAL**	**95,97,486**	**42,52,429**

ANNEXURES

Star Analytical Services

STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017

MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986

TC-8620

TEST REPORT

Date: 31.12.2021

Name of the Customer:
M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Test Report No	: **SAS/W-WW/12/21 – 2423**
Sample particulars	: Aldindi
Sample quantity	: 2 Liters
Collected by / date	: SAS / 06.12.2021
Sample Registration date	: 07.12.2021
Analysis Commenced on	: 07.12.2021
Analysis Completed on	: 25.12.2021
Sub Contract Testing	: NA

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
01	pH	--	APHA 23rd Edition; 4500 H^+ B	7.25	6.5-8.5	No Relaxation
02	Turbidity	NTU	APHA 23rd Edition; 2130 B	< 1.0	1.0	5.0
03	Total Dissolved Solids	mg/L	APHA 23rd Edition; 2540 C	569.5	500.0	2000.0
04	Color	CU	APHA 23rd Edition; 2120 B	< 5.0	5.0	15.0
05	Taste	--	APHA 23rdEdition,2017, 2160 B	Agreeable	Agreeable	Agreeable
06	Odor	--	--	Agreeable	Agreeable	Agreeable
07	Alkalinity as $CaCO_3$	mg/L	APHA 23rd Edition; 2320 B	339.5	200.0	600.0
08	Total Hardness as $CaCO_3$	mg/L	APHA 23rd Edition; 2340 C	334.2	200.0	600.0
09	Calcium as Ca	mg/L	APHA 23rd Edition; 3500 Ca B	116.2	75.0	200.0
10	Magnesium as Mg	mg/L	APHA 23rd Edition; 3500 Mg B	14.9	30.0	100.0
11	Chlorides as Cl^-	mg/L	APHA 23rd Edition; 4500 Cl^- B	126.8	250.0	1000.0
12	Sulphates as SO_4^{-2}	mg/L	APHA 23rd Edition; 4500 SO_4^{-2} E	40.8	200.0	400.0
13	Nitrate Nitrogen as N	mg/L	APHA 23rd Edition; 4500 NO_3^- B	18.7	45.0	No Relaxation
14	Fluorides as F^-	mg/L	APHA 23rd Edition; 4500 F^- D	< 1.0	1.0	1.5
15	Iron as Fe	mg/L	APHA 23rd Edition; 3500 Fe B	< 0.3	0.3	No Relaxation
16	Manganese as Mn	mg/L	APHA 23rd Edition; 3500 Mn B	< 0.01	0.1	0.3
17	Phenolic Compounds as Phenols	mg/L	APHA 23rd Edition; 5530 D	< 0.001	0.001	0.002

TEST REPORT

Report No : **SAS/W-WW/12/21 –2423**

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
18	Free Residual Chlorine as Cl	mg/L	APHA 23rd Edition; 4500 Cl B	< 0.01	0.2	1.0
19	Barium as Ba	mg/L	APHA 23rdEdition,2017, 3500 Ba	<0.2	0.2	1.0
20	Total Cyanide	mg/L	APHA 23rd Edition; 4500 CN C, E	< 0.01	0.05	No Relaxation
21	Copper as Cu	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.05	1.50
22	Cadmium Cd	mg/L	APHA 23rd Edition; 3111 B	< 0.001	0.003	No Relaxation
23	Zinc as Zn	mg/L	APHA 23rd Edition; 3111 B	< 0.5	5.0	15.0
24	Lead as Pb	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.01	No Relaxation
25	Boron (as B),	mg/L	APHA 23rd Edition 4500-B B	<0.1	0.5	1.0
26	Anionic detergents (As MBAS)	mg/L	Annex K of IS 13428	<0.2	0.2	1.0
27	Ammonia as Total Ammonia-N	mg/L	APHA 23rdEdition,2017, 4500 NH3 B, C	<0.5	0.5	No Relaxation
28	Silver as Ag	mg/L	APHA 23rdEdition,2017, 3500-Ag	<0.01	0.1	No Relaxation
29	Sulphide as H2S	mg/L	APHA 23rdEdition,2017, 4500 S2 F	<0.05	0.05	No Relaxation
30	Mineral Oil	mg/L	APHA 23rdEdition,2017, 5520 B	<0.5	0.5	No Relaxation
31	Selenium (as Se),	mg/L	APHA 23rd Edition 3111 B	<0.01	0.01	No relaxation
32	Aluminium as Al	mg/L	APHA 23rd Edition 3111 B	< 0.03	0.03	0.2
33	Total Coliform	MPN/ 100ml	APHA 23rd Edition 9221B	Absent	Not Specified	Shall not be detectable in any 100 ml sample
34	E-Coli	MPN/ 100ml	APHA 23rd Edition 9221 B	Absent	Not Specified	Shall not be detectable in any 100 ml sample

Opinion and interpretation: Nil

NA: Not Applicable

1. Reports pertained only to the submitted sample.
2. Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

Star Analytical Services GUNTUR

Star Analytical Services

STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017

MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986

TC-8620

TEST REPORT

Date: 31.12.2021

Name of the Customer:
M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Test Report No	: **SAS/W-WW/12/21 – 2424**
Sample particulars	: Persal Gundi
Sample quantity	: 2 Liters
Collected by / date	: SAS / 06.12.2021
Sample Registration date	: 07.12.2021
Analysis Commenced on	: 07.12.2021
Analysis Completed on	: 25.12.2021
Sub Contract Testing	: NA

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
01	pH	--	APHA 23rd Edition; 4500 H^+ B	7.48	6.5-8.5	No Relaxation
02	Turbidity	NTU	APHA 23rd Edition; 2130 B	< 1.0	1.0	5.0
03	Total Dissolved Solids	mg/L	APHA 23rd Edition; 2540 C	532.5	500.0	2000.0
04	Color	CU	APHA 23rd Edition; 2120 B	< 5.0	5.0	15.0
05	Taste	--	APHA 23rd Edition,2017, 2160 B	Agreeable	Agreeable	Agreeable
06	Odor	--	--	Agreeable	Agreeable	Agreeable
07	Alkalinity as $CaCO_3$	mg/L	APHA 23rd Edition; 2320 B	350.1	200.0	600.0
08	Total Hardness as $CaCO_3$	mg/L	APHA 23rd Edition; 2340 C	349.8	200.0	600.0
09	Calcium as Ca	mg/L	APHA 23rd Edition; 3500 Ca B	99.5	75.0	200.0
10	Magnesium as Mg	mg/L	APHA 23rd Edition; 3500 Mg B	16.4	30.0	100.0
11	Chlorides as Cl^-	mg/L	APHA 23rd Edition; 4500 Cl^- B	108.5	250.0	1000.0
12	Sulphates as SO_4^{-2}	mg/L	APHA 23rd Edition; 4500 SO_4^{-2} E	39.5	200.0	400.0
13	Nitrate Nitrogen as N	mg/L	APHA 23rd Edition; 4500 NO_3^- B	19.9	45.0	No Relaxation
14	Fluorides as F^-	mg/L	APHA 23rd Edition; 4500 F^- D	< 1.0	1.0	1.5
15	Iron as Fe	mg/L	APHA 23rd Edition; 3500 Fe B	< 0.3	0.3	No Relaxation
16	Manganese as Mn	mg/L	APHA 23rd Edition; 3500 Mn B	< 0.01	0.1	0.3
17	Phenolic Compounds as Phenols	mg/L	APHA 23rd Edition; 5530 D	< 0.001	0.001	0.002

TEST REPORT

Report No : **SAS/W-WW/12/21 –2424**

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
18	Free Residual Chlorine as Cl	mg/L	APHA 23rd Edition; 4500 Cl B	< 0.01	0.2	1.0
19	Barium as Ba	mg/L	APHA 23rdEdition,2017, 3500 Ba	<0.2	0.2	1.0
20	Total Cyanide	mg/L	APHA 23rd Edition; 4500 CN⁻ C, E	< 0.01	0.05	No Relaxation
21	Copper as Cu	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.05	1.50
22	Cadmium Cd	mg/L	APHA 23rd Edition; 3111 B	< 0.001	0.003	No Relaxation
23	Zinc as Zn	mg/L	APHA 23rd Edition; 3111 B	< 0.5	5.0	15.0
24	Lead as Pb	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.01	No Relaxation
25	Boron (as B),	mg/L	APHA 23rd Edition 4500-B B	<0.1	0.5	1.0
26	Anionic detergents (As MBAS)	mg/L	Annex K of IS 13428	<0.2	0.2	1.0
27	Ammonia as Total Ammonia-N	mg/L	APHA 23rdEdition,2017, 4500 NH3 B, C	<0.5	0.5	No Relaxation
28	Silver as Ag	mg/L	APHA 23rdEdition,2017, 3500-Ag	<0.01	0.1	No Relaxation
29	Sulphide as H2S	mg/L	APHA 23rdEdition,2017, 4500 S2 F	<0.05	0.05	No Relaxation
30	Mineral Oil	mg/L	APHA 23rdEdition,2017, 5520 B	<0.5	0.5	No Relaxation
31	Selenium (as Se),	mg/L	APHA 23rd Edition 3111 B	<0.01	0.01	No relaxation
32	Aluminium as Al	mg/L	APHA 23rd Edition 3111 B	< 0.03	0.03	0.2
33	Total Coliform	MPN/100ml	APHA 23rd Edition 9221B	Absent	Not Specified	Shall not be detectable in any 100 ml sample
34	E-Coli	MPN/100ml	APHA 23rd Edition 9221 B	Absent	Not Specified	Shall not be detectable in any 100 ml sample

Opinion and interpretation: Nil

NA: Not Applicable

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2. Test reports shall not be reproduced except in full, without written approval of the laboratory.

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Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

STAR ANALYTICAL SERVICES
(ENVIRONMENTAL MONITORING, TESTING & SERVICES)
Laboratory Accredited by NABL as per ISO/IEC 17025:2017
MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986

TC-8620

TEST REPORT

Date: 31.12.2021

Name of the Customer:
M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Test Report No	: **SAS/W-WW/12/21 – 2425**
Sample particulars	: Ekra Kurd
Sample quantity	: 2 Liters
Collected by / date	: SAS / 06.12.2021
Sample Registration date	: 07.12.2021
Analysis Commenced on	: 07.12.2021
Analysis Completed on	: 25.12.2021
Sub Contract Testing	: NA

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
01	pH	--	APHA 23rd Edition; 4500 H^+ B	7.86	6.5-8.5	No Relaxation
02	Turbidity	NTU	APHA 23rd Edition; 2130 B	< 1.0	1.0	5.0
03	Total Dissolved Solids	mg/L	APHA 23rd Edition; 2540 C	537.2	500.0	2000.0
04	Color	CU	APHA 23rd Edition; 2120 B	< 5.0	5.0	15.0
05	Taste	--	APHA 23rdEdition,2017, 2160 B	Agreeable	Agreeable	Agreeable
06	Odor	--	--	Agreeable	Agreeable	Agreeable
07	Alkalinity as $CaCO_3$	mg/L	APHA 23rd Edition; 2320 B	322.6	200.0	600.0
08	Total Hardness as $CaCO_3$	mg/L	APHA 23rd Edition; 2340 C	320.1	200.0	600.0
09	Calcium as Ca	mg/L	APHA 23rd Edition; 3500 Ca B	97.6	75.0	200.0
10	Magnesium as Mg	mg/L	APHA 23rd Edition; 3500 Mg B	18.6	30.0	100.0
11	Chlorides as Cl^-	mg/L	APHA 23rd Edition; 4500 Cl^- B	123.5	250.0	1000.0
12	Sulphates as SO_4^{-2}	mg/L	APHA 23rd Edition; 4500 SO_4^{-2} E	37.8	200.0	400.0
13	Nitrate Nitrogen as N	mg/L	APHA 23rd Edition; 4500 NO_3^- B	21.4	45.0	No Relaxation
14	Fluorides as F^-	mg/L	APHA 23rd Edition; 4500 F^- D	< 1.0	1.0	1.5
15	Iron as Fe	mg/L	APHA 23rd Edition; 3500 Fe B	< 0.3	0.3	No Relaxation
16	Manganese as Mn	mg/L	APHA 23rd Edition; 3500 Mn B	< 0.01	0.1	0.3
17	Phenolic Compounds as Phenols	mg/L	APHA 23rd Edition; 5530 D	< 0.001	0.001	0.002

TEST REPORT

Report No : **SAS/W-WW/12/21 –2425**

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
18	Free Residual Chlorine as Cl	mg/L	APHA 23rd Edition; 4500 Cl B	< 0.01	0.2	1.0
19	Barium as Ba	mg/L	APHA 23rdEdition,2017, 3500 Ba	<0.2	0.2	1.0
20	Total Cyanide	mg/L	APHA 23rd Edition; 4500 CN^- C, E	< 0.01	0.05	No Relaxation
21	Copper as Cu	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.05	1.50
22	Cadmium Cd	mg/L	APHA 23rd Edition; 3111 B	< 0.001	0.003	No Relaxation
23	Zinc as Zn	mg/L	APHA 23rd Edition; 3111 B	< 0.5	5.0	15.0
24	Lead as Pb	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.01	No Relaxation
25	Boron (as B),	mg/L	APHA 23rd Edition 4500-B B	<0.1	0.5	1.0
26	Anionic detergents (As MBAS)	mg/L	Annex K of IS 13428	<0.2	0.2	1.0
27	Ammonia as Total Ammonia-N	mg/L	APHA 23rdEdition,2017, 4500 NH3 B, C	<0.5	0.5	No Relaxation
28	Silver as Ag	mg/L	APHA 23rdEdition,2017, 3500-Ag	<0.01	0.1	No Relaxation
29	Sulphide as H2S	mg/L	APHA 23rdEdition,2017, 4500 S2 F	<0.05	0.05	No Relaxation
30	Mineral Oil	mg/L	APHA 23rdEdition,2017, 5520 B	<0.5	0.5	No Relaxation
31	Selenium (as Se),	mg/L	APHA 23rd Edition 3111 B	<0.01	0.01	No relaxation
32	Aluminium as Al	mg/L	APHA 23rd Edition 3111 B	< 0.03	0.03	0.2
33	Total Coliform	MPN/100ml	APHA 23rd Edition 9221B	Absent	Not Specified	Shall not be detectable in any 100 ml sample
34	E-Coli	MPN/100ml	APHA 23rd Edition 9221 B	Absent	Not Specified	Shall not be detectable in any 100 ml sample

Opinion and interpretation: Nil

NA: Not Applicable

1. Reports pertained only to the submitted sample.
2. Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

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Laboratory Accredited by NABL as per ISO/IEC 17025:2017
MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986
TC-8620

TEST REPORT

Date: 31.12.2021

Name of the Customer:
M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Test Report No : **SAS/W-WW/12/21 – 2426**
Sample particulars : Manger
Sample quantity : 2 Liters
Collected by / date : SAS / 06.12.2021
Sample Registration date : 07.12.2021
Analysis Commenced on : 07.12.2021
Analysis Completed on : 25.12.2021
Sub Contract Testing : NA

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
01	pH	--	APHA 23rd Edition; 4500 H^+ B	7.58	6.5-8.5	No Relaxation
02	Turbidity	NTU	APHA 23rd Edition; 2130 B	< 1.0	1.0	5.0
03	Total Dissolved Solids	mg/L	APHA 23rd Edition; 2540 C	532.4	500.0	2000.0
04	Color	CU	APHA 23rd Edition; 2120 B	< 5.0	5.0	15.0
05	Taste	--	APHA 23rdEdition,2017, 2160 B	Agreeable	Agreeable	Agreeable
06	Odor	--	--	Agreeable	Agreeable	Agreeable
07	Alkalinity as $CaCO_3$	mg/L	APHA 23rd Edition; 2320 B	336.2	200.0	600.0
08	Total Hardness as $CaCO_3$	mg/L	APHA 23rd Edition; 2340 C	329.5	200.0	600.0
09	Calcium as Ca	mg/L	APHA 23rd Edition; 3500 Ca B	105.8	75.0	200.0
10	Magnesium as Mg	mg/L	APHA 23rd Edition; 3500 Mg B	19.7	30.0	100.0
11	Chlorides as Cl^-	mg/L	APHA 23rd Edition; 4500 Cl^- B	120.4	250.0	1000.0
12	Sulphates as SO_4^{-2}	mg/L	APHA 23rd Edition; 4500 SO_4^{-2} E	32.7	200.0	400.0
13	Nitrate Nitrogen as N	mg/L	APHA 23rd Edition; 4500 NO_3^- B	17.8	45.0	No Relaxation
14	Fluorides as F^-	mg/L	APHA 23rd Edition; 4500 F^- D	< 1.0	1.0	1.5
15	Iron as Fe	mg/L	APHA 23rd Edition; 3500 Fe B	< 0.3	0.3	No Relaxation
16	Manganese as Mn	mg/L	APHA 23rd Edition; 3500 Mn B	< 0.01	0.1	0.3
17	Phenolic Compounds as Phenols	mg/L	APHA 23rd Edition; 5530 D	< 0.001	0.001	0.002

TEST REPORT

Report No : **SAS/W-WW/12/21 –2426**

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
18	Free Residual Chlorine as Cl	mg/L	APHA 23rd Edition; 4500 Cl B	< 0.01	0.2	1.0
19	Barium as Ba	mg/L	APHA 23rdEdition,2017, 3500 Ba	<0.2	0.2	1.0
20	Total Cyanide	mg/L	APHA 23rd Edition; 4500 CN^- C, E	< 0.01	0.05	No Relaxation
21	Copper as Cu	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.05	1.50
22	Cadmium Cd	mg/L	APHA 23rd Edition; 3111 B	< 0.001	0.003	No Relaxation
23	Zinc as Zn	mg/L	APHA 23rd Edition; 3111 B	< 0.5	5.0	15.0
24	Lead as Pb	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.01	No Relaxation
25	Boron (as B),	mg/L	APHA 23rd Edition 4500-B B	<0.1	0.5	1.0
26	Anionic detergents (As MBAS)	mg/L	Annex K of IS 13428	<0.2	0.2	1.0
27	Ammonia as Total Ammonia-N	mg/L	APHA 23rdEdition,2017, 4500 NH3 B, C	<0.5	0.5	No Relaxation
28	Silver as Ag	mg/L	APHA 23rdEdition,2017, 3500-Ag	<0.01	0.1	No Relaxation
29	Sulphide as H2S	mg/L	APHA 23rdEdition,2017, 4500 S2 F	<0.05	0.05	No Relaxation
30	Mineral Oil	mg/L	APHA 23rdEdition,2017, 5520 B	<0.5	0.5	No Relaxation
31	Selenium (as Se),	mg/L	APHA 23rd Edition 3111 B	<0.01	0.01	No relaxation
32	Aluminium as Al	mg/L	APHA 23rd Edition 3111 B	< 0.03	0.03	0.2
33	Total Coliform	MPN/ 100ml	APHA 23rd Edition 9221B	Absent	Not Specified	Shall not be detectable in any 100 ml sample
34	E-Coli	MPN/ 100ml	APHA 23rd Edition 9221 B	Absent	Not Specified	Shall not be detectable in any 100 ml sample

Opinion and interpretation: Nil

NA: Not Applicable

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-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

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MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986
TC-8620

TEST REPORT

Date: 31.12.2021

Name of the Customer:
M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Test Report No : **SAS/W-WW/12/21 – 2427**
Sample particulars : Hedari
Sample quantity : 2 Liters
Collected by / date : SAS / 06.12.2021
Sample Registration date : 07.12.2021
Analysis Commenced on : 07.12.2021
Analysis Completed on : 25.12.2021
Sub Contract Testing : NA

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
01	pH	--	APHA 23rd Edition; 4500 H^+ B	7.45	6.5-8.5	No Relaxation
02	Turbidity	NTU	APHA 23rd Edition; 2130 B	< 1.0	1.0	5.0
03	Total Dissolved Solids	mg/L	APHA 23rd Edition; 2540 C	547.2	500.0	2000.0
04	Color	CU	APHA 23rd Edition; 2120 B	< 5.0	5.0	15.0
05	Taste	--	APHA 23rdEdition,2017, 2160 B	Agreeable	Agreeable	Agreeable
06	Odor	--	--	Agreeable	Agreeable	Agreeable
07	Alkalinity as $CaCO_3$	mg/L	APHA 23rd Edition; 2320 B	343.6	200.0	600.0
08	Total Hardness as $CaCO_3$	mg/L	APHA 23rd Edition; 2340 C	339.4	200.0	600.0
09	Calcium as Ca	mg/L	APHA 23rd Edition; 3500 Ca B	91.4	75.0	200.0
10	Magnesium as Mg	mg/L	APHA 23rd Edition; 3500 Mg B	22.1	30.0	100.0
11	Chlorides as Cl^-	mg/L	APHA 23rd Edition; 4500 Cl^- B	126.2	250.0	1000.0
12	Sulphates as SO_4^{-2}	mg/L	APHA 23rd Edition; 4500 SO_4^{-2} E	35.9	200.0	400.0
13	Nitrate Nitrogen as N	mg/L	APHA 23rd Edition; 4500 NO_3^- B	16.9	45.0	No Relaxation
14	Fluorides as F^-	mg/L	APHA 23rd Edition; 4500 F^- D	< 1.0	1.0	1.5
15	Iron as Fe	mg/L	APHA 23rd Edition; 3500 Fe B	< 0.3	0.3	No Relaxation
16	Manganese as Mn	mg/L	APHA 23rd Edition; 3500 Mn B	< 0.01	0.1	0.3
17	Phenolic Compounds as Phenols	mg/L	APHA 23rd Edition; 5530 D	< 0.001	0.001	0.002

TEST REPORT

Report No : **SAS/W-WW/12/21 –2427**

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
18	Free Residual Chlorine as Cl	mg/L	APHA 23rd Edition; 4500 Cl B	< 0.01	0.2	1.0
19	Barium as Ba	mg/L	APHA 23rdEdition,2017, 3500 Ba	<0.2	0.2	1.0
20	Total Cyanide	mg/L	APHA 23rd Edition; 4500 CN^- C, E	< 0.01	0.05	No Relaxation
21	Copper as Cu	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.05	1.50
22	Cadmium Cd	mg/L	APHA 23rd Edition; 3111 B	< 0.001	0.003	No Relaxation
23	Zinc as Zn	mg/L	APHA 23rd Edition; 3111 B	< 0.5	5.0	15.0
24	Lead as Pb	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.01	No Relaxation
25	Boron (as B),	mg/L	APHA 23rd Edition 4500-B B	<0.1	0.5	1.0
26	Anionic detergents (As MBAS)	mg/L	Annex K of IS 13428	<0.2	0.2	1.0
27	Ammonia as Total Ammonia-N	mg/L	APHA 23rdEdition,2017, 4500 NH3 B, C	<0.5	0.5	No Relaxation
28	Silver as Ag	mg/L	APHA 23rdEdition,2017, 3500-Ag	<0.01	0.1	No Relaxation
29	Sulphide as H2S	mg/L	APHA 23rdEdition,2017, 4500 S2 F	<0.05	0.05	No Relaxation
30	Mineral Oil	mg/L	APHA 23rdEdition,2017, 5520 B	<0.5	0.5	No Relaxation
31	Selenium (as Se),	mg/L	APHA 23rd Edition 3111 B	<0.01	0.01	No relaxation
32	Aluminium as Al	mg/L	APHA 23rd Edition 3111 B	< 0.03	0.03	0.2
33	Total Coliform	MPN/100ml	APHA 23rd Edition 9221B	Absent	Not Specified	Shall not be detectable in any 100 ml sample
34	E-Coli	MPN/100ml	APHA 23rd Edition 9221 B	Absent	Not Specified	Shall not be detectable in any 100 ml sample

Opinion and interpretation: Nil

NA: Not Applicable

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2. Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

Star Analytical Services GUNTUR

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

TEST REPORT

Date: 31.12.2021

Name of the Customer:
M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Test Report No	: **SAS/W-WW/12/21 – 2428**
Sample particulars	: Petta
Sample quantity	: 2 Liters
Collected by / date	: SAS / 06.12.2021
Sample Registration date	: 07.12.2021
Analysis Commenced on	: 07.12.2021
Analysis Completed on	: 25.12.2021
Sub Contract Testing	: NA

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
01	pH	--	APHA 23rd Edition; 4500 H^+ B	7.56	6.5-8.5	No Relaxation
02	Turbidity	NTU	APHA 23rd Edition; 2130 B	< 1.0	1.0	5.0
03	Total Dissolved Solids	mg/L	APHA 23rd Edition; 2540 C	522.5	500.0	2000.0
04	Color	CU	APHA 23rd Edition; 2120 B	< 5.0	5.0	15.0
05	Taste	--	APHA 23rdEdition,2017, 2160 B	Agreeable	Agreeable	Agreeable
06	Odor	--	--	Agreeable	Agreeable	Agreeable
07	Alkalinity as $CaCO_3$	mg/L	APHA 23rd Edition; 2320 B	324.5	200.0	600.0
08	Total Hardness as $CaCO_3$	mg/L	APHA 23rd Edition; 2340 C	298.1	200.0	600.0
09	Calcium as Ca	mg/L	APHA 23rd Edition; 3500 Ca B	90.6	75.0	200.0
10	Magnesium as Mg	mg/L	APHA 23rd Edition; 3500 Mg B	24.2	30.0	100.0
11	Chlorides as Cl^-	mg/L	APHA 23rd Edition; 4500 Cl^- B	142.5	250.0	1000.0
12	Sulphates as SO_4^{-2}	mg/L	APHA 23rd Edition; 4500 SO_4^{-2} E	29.9	200.0	400.0
13	Nitrate Nitrogen as N	mg/L	APHA 23rd Edition; 4500 NO_3^- B	18.6	45.0	No Relaxation
14	Fluorides as F^-	mg/L	APHA 23rd Edition; 4500 F^- D	< 1.0	1.0	1.5
15	Iron as Fe	mg/L	APHA 23rd Edition; 3500 Fe B	< 0.3	0.3	No Relaxation
16	Manganese as Mn	mg/L	APHA 23rd Edition; 3500 Mn B	< 0.01	0.1	0.3
17	Phenolic Compounds as Phenols	mg/L	APHA 23rd Edition; 5530 D	< 0.001	0.001	0.002

TEST REPORT

Report No : **SAS/W-WW/12/21 –2428**

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
18	Free Residual Chlorine as Cl	mg/L	APHA 23rd Edition; 4500 Cl B	< 0.01	0.2	1.0
19	Barium as Ba	mg/L	APHA 23rdEdition,2017, 3500 Ba	<0.2	0.2	1.0
20	Total Cyanide	mg/L	APHA 23rd Edition; 4500 CN^- C, E	< 0.01	0.05	No Relaxation
21	Copper as Cu	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.05	1.50
22	Cadmium Cd	mg/L	APHA 23rd Edition; 3111 B	< 0.001	0.003	No Relaxation
23	Zinc as Zn	mg/L	APHA 23rd Edition; 3111 B	< 0.5	5.0	15.0
24	Lead as Pb	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.01	No Relaxation
25	Boron (as B),	mg/L	APHA 23rd Edition 4500-B B	<0.1	0.5	1.0
26	Anionic detergents (As MBAS)	mg/L	Annex K of IS 13428	<0.2	0.2	1.0
27	Ammonia as Total Ammonia-N	mg/L	APHA 23rdEdition,2017, 4500 NH3 B, C	<0.5	0.5	No Relaxation
28	Silver as Ag	mg/L	APHA 23rdEdition,2017, 3500-Ag	<0.01	0.1	No Relaxation
29	Sulphide as H2S	mg/L	APHA 23rdEdition,2017, 4500 S2 F	<0.05	0.05	No Relaxation
30	Mineral Oil	mg/L	APHA 23rdEdition,2017, 5520 B	<0.5	0.5	No Relaxation
31	Selenium (as Se),	mg/L	APHA 23rd Edition 3111 B	<0.01	0.01	No relaxation
32	Aluminium as Al	mg/L	APHA 23rd Edition 3111 B	< 0.03	0.03	0.2
33	Total Coliform	MPN/100ml	APHA 23rd Edition 9221B	Absent	Not Specified	Shall not be detectable in any 100 ml sample
34	E-Coli	MPN/100ml	APHA 23rd Edition 9221 B	Absent	Not Specified	Shall not be detectable in any 100 ml sample

Opinion and interpretation: Nil

NA: Not Applicable

1. Reports pertained only to the submitted sample.
2. Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

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Laboratory Accredited by NABL as per ISO/IEC 17025:2017
MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986
TC-8620

TEST REPORT

Date: 31.12.2021

Name of the Customer:
M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Test Report No : **SAS/W-WW/12/21 – 2429**
Sample particulars : Bande
Sample quantity : 2 Liters
Collected by / date : SAS / 06.12.2021
Sample Registration date : 07.12.2021
Analysis Commenced on : 07.12.2021
Analysis Completed on : 25.12.2021
Sub Contract Testing : NA

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
01	pH	--	APHA 23rd Edition; 4500 H^+ B	7.21	6.5-8.5	No Relaxation
02	Turbidity	NTU	APHA 23rd Edition; 2130 B	< 1.0	1.0	5.0
03	Total Dissolved Solids	mg/L	APHA 23rd Edition; 2540 C	606.3	500.0	2000.0
04	Color	CU	APHA 23rd Edition; 2120 B	< 5.0	5.0	15.0
05	Taste	--	APHA 23rdEdition,2017, 2160 B	Agreeable	Agreeable	Agreeable
06	Odor	--	--	Agreeable	Agreeable	Agreeable
07	Alkalinity as $CaCO_3$	mg/L	APHA 23rd Edition; 2320 B	336.3	200.0	600.0
08	Total Hardness as $CaCO_3$	mg/L	APHA 23rd Edition; 2340 C	290.6	200.0	600.0
09	Calcium as Ca	mg/L	APHA 23rd Edition; 3500 Ca B	89.8	75.0	200.0
10	Magnesium as Mg	mg/L	APHA 23rd Edition; 3500 Mg B	23.1	30.0	100.0
11	Chlorides as Cl^-	mg/L	APHA 23rd Edition; 4500 Cl^- B	139.8	250.0	1000.0
12	Sulphates as SO_4^{-2}	mg/L	APHA 23rd Edition; 4500 SO_4^{-2} E	32.8	200.0	400.0
13	Nitrate Nitrogen as N	mg/L	APHA 23rd Edition; 4500 NO_3^- B	23.7	45.0	No Relaxation
14	Fluorides as F^-	mg/L	APHA 23rd Edition; 4500 F^- D	< 1.0	1.0	1.5
15	Iron as Fe	mg/L	APHA 23rd Edition; 3500 Fe B	< 0.3	0.3	No Relaxation
16	Manganese as Mn	mg/L	APHA 23rd Edition; 3500 Mn B	< 0.01	0.1	0.3
17	Phenolic Compounds as Phenols	mg/L	APHA 23rd Edition; 5530 D	< 0.001	0.001	0.002

TEST REPORT

Report No : SAS/W-WW/12/21 –2429

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
18	Free Residual Chlorine as Cl	mg/L	APHA 23rd Edition; 4500 Cl B	< 0.01	0.2	1.0
19	Barium as Ba	mg/L	APHA 23rdEdition,2017, 3500 Ba	<0.2	0.2	1.0
20	Total Cyanide	mg/L	APHA 23rd Edition; 4500 CN^- C, E	< 0.01	0.05	No Relaxation
21	Copper as Cu	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.05	1.50
22	Cadmium Cd	mg/L	APHA 23rd Edition; 3111 B	< 0.001	0.003	No Relaxation
23	Zinc as Zn	mg/L	APHA 23rd Edition; 3111 B	< 0.5	5.0	15.0
24	Lead as Pb	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.01	No Relaxation
25	Boron (as B),	mg/L	APHA 23rd Edition 4500-B B	<0.1	0.5	1.0
26	Anionic detergents (As MBAS)	mg/L	Annex K of IS 13428	<0.2	0.2	1.0
27	Ammonia as Total Ammonia-N	mg/L	APHA 23rdEdition,2017, 4500 NH3 B, C	<0.5	0.5	No Relaxation
28	Silver as Ag	mg/L	APHA 23rdEdition,2017, 3500-Ag	<0.01	0.1	No Relaxation
29	Sulphide as H2S	mg/L	APHA 23rdEdition,2017, 4500 S2 F	<0.05	0.05	No Relaxation
30	Mineral Oil	mg/L	APHA 23rdEdition,2017, 5520 B	<0.5	0.5	No Relaxation
31	Selenium (as Se),	mg/L	APHA 23rd Edition 3111 B	<0.01	0.01	No relaxation
32	Aluminium as Al	mg/L	APHA 23rd Edition 3111 B	< 0.03	0.03	0.2
33	Total Coliform	MPN/100ml	APHA 23rd Edition 9221B	Absent	Not Specified	Shall not be detectable in any 100 ml sample
34	E-Coli	MPN/100ml	APHA 23rd Edition 9221 B	Absent	Not Specified	Shall not be detectable in any 100 ml sample

Opinion and interpretation: Nil

NA: Not Applicable

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Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

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MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986
TC-8620

TEST REPORT

Date: 31.12.2021

Name of the Customer:
M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Test Report No : **SAS/W-WW/12/21 – 2430**
Sample particulars : Malan Pahad
Sample quantity : 2 Liters
Collected by / date : SAS / 06.12.2021
Sample Registration date : 07.12.2021
Analysis Commenced on : 07.12.2021
Analysis Completed on : 25.12.2021
Sub Contract Testing : NA

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
01	pH	--	APHA 23rd Edition; 4500 H^+ B	7.34	6.5-8.5	No Relaxation
02	Turbidity	NTU	APHA 23rd Edition; 2130 B	< 1.0	1.0	5.0
03	Total Dissolved Solids	mg/L	APHA 23rd Edition; 2540 C	631.5	500.0	2000.0
04	Color	CU	APHA 23rd Edition; 2120 B	< 5.0	5.0	15.0
05	Taste	--	APHA 23rdEdition,2017, 2160 B	Agreeable	Agreeable	Agreeable
06	Odor	--	--	Agreeable	Agreeable	Agreeable
07	Alkalinity as $CaCO_3$	mg/L	APHA 23rd Edition; 2320 B	290.2	200.0	600.0
08	Total Hardness as $CaCO_3$	mg/L	APHA 23rd Edition; 2340 C	271.5	200.0	600.0
09	Calcium as Ca	mg/L	APHA 23rd Edition; 3500 Ca B	98.6	75.0	200.0
10	Magnesium as Mg	mg/L	APHA 23rd Edition; 3500 Mg B	24.2	30.0	100.0
11	Chlorides as Cl^-	mg/L	APHA 23rd Edition; 4500 Cl^- B	126.3	250.0	1000.0
12	Sulphates as SO_4^{-2}	mg/L	APHA 23rd Edition; 4500 SO_4^{-2} E	25.4	200.0	400.0
13	Nitrate Nitrogen as N	mg/L	APHA 23rd Edition; 4500 NO_3^- B	24.8	45.0	No Relaxation
14	Fluorides as F^-	mg/L	APHA 23rd Edition; 4500 F^- D	< 1.0	1.0	1.5
15	Iron as Fe	mg/L	APHA 23rd Edition; 3500 Fe B	< 0.3	0.3	No Relaxation
16	Manganese as Mn	mg/L	APHA 23rd Edition; 3500 Mn B	< 0.01	0.1	0.3
17	Phenolic Compounds as Phenols	mg/L	APHA 23rd Edition; 5530 D	< 0.001	0.001	0.002

TEST REPORT

Report No : **SAS/W-WW/12/21 –2430**

S. No	Parameter	Unit	Method	G.W Result	IS 10,500 Limits	
					Acceptable	Permissible
18	Free Residual Chlorine as Cl	mg/L	APHA 23rd Edition; 4500 Cl B	< 0.01	0.2	1.0
19	Barium as Ba	mg/L	APHA 23rdEdition,2017, 3500 Ba	<0.2	0.2	1.0
20	Total Cyanide	mg/L	APHA 23rd Edition; 4500 CN^- C, E	< 0.01	0.05	No Relaxation
21	Copper as Cu	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.05	1.50
22	Cadmium Cd	mg/L	APHA 23rd Edition; 3111 B	< 0.001	0.003	No Relaxation
23	Zinc as Zn	mg/L	APHA 23rd Edition; 3111 B	< 0.5	5.0	15.0
24	Lead as Pb	mg/L	APHA 23rd Edition; 3111 B	< 0.01	0.01	No Relaxation
25	Boron (as B),	mg/L	APHA 23rd Edition 4500-B B	<0.1	0.5	1.0
26	Anionic detergents (As MBAS)	mg/L	Annex K of IS 13428	<0.2	0.2	1.0
27	Ammonia as Total Ammonia-N	mg/L	APHA 23rdEdition,2017, 4500 NH3 B, C	<0.5	0.5	No Relaxation
28	Silver as Ag	mg/L	APHA 23rdEdition,2017, 3500-Ag	<0.01	0.1	No Relaxation
29	Sulphide as H2S	mg/L	APHA 23rdEdition,2017, 4500 S2 F	<0.05	0.05	No Relaxation
30	Mineral Oil	mg/L	APHA 23rdEdition,2017, 5520 B	<0.5	0.5	No Relaxation
31	Selenium (as Se),	mg/L	APHA 23rd Edition 3111 B	<0.01	0.01	No relaxation
32	Aluminium as Al	mg/L	APHA 23rd Edition 3111 B	< 0.03	0.03	0.2
33	Total Coliform	MPN/ 100ml	APHA 23rd Edition 9221B	Absent	Not Specified	Shall not be detectable in any 100 ml sample
34	E-Coli	MPN/ 100ml	APHA 23rd Edition 9221 B	Absent	Not Specified	Shall not be detectable in any 100 ml sample

Opinion and interpretation: Nil

NA: Not Applicable

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2. Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

Star Analytical Services

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MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986

TC-8620

TEST REPORT

Date: 31.12.2021

Name of the Customer:
M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Test Report No	: **SAS/W-WW/12/21 – 2431**
Sample particulars	: BANDE
Sample quantity	: 2 Liters
Collected by / date	: SAS / 06.12.2021
Sample Registration date	: 07.12.2021
Analysis Commenced on	: 07.12.2021
Analysis Completed on	: 25.12.2021
Sub Contract Testing	: NA

S. No	Parameter	Method	Unit	S.W-1 Result
1	pH	APHA 23rd Edition 4500 H+ B	--	7.44
2	Color	APHA 23rd Edition 2120 B	CU	< 1.0
3	Turbidity	APHA 23rd Edition 2130 B	NTU	<5.0
4	Total Dissolved Solids	APHA 23rd Edition 2540 C	mg/l	560.1
5	Total Alkalinity (as CaCO3)	APHA 23rd Edition 2320 B	mg/l	163.1
6	Total Hardness (as CaCO3)	APHA 23rd Edition 2340 C	mg/l	211.1
7	Sulphate (as SO_4)	APHA 23rd Edition 4500 SO4 E	mg/l	75.6
8	Chloride (as Cl)	APHA 23rd Edition 4500 Cl- B	mg/l	117.8
9	Lead as Pb	APHA 23rd Edition 3111B	mg/l	< 0.05
10	Cadmium as Cd	APHA 23rd Edition 3111B	mg/l	< 0.01
11	Total Chromium as Cr	APHA 23rd Edition 3111B	mg/l	< 0.05
12	Copper as Cu	APHA 23rd Edition 3111B	mg/l	< 0.01
13	Zinc as Zn	APHA 23rd Edition 3111B	mg/l	< 0.5
14	Nickel as Ni	APHA 23rd Edition 3111B	mg/l	< 0.5
15	Fluorides as F	APHA 23rd Edition 4500 F- D	mg/l	<1.0
16	Aluminum as Al	APHA 23rd Edition 3500 Al B	mg/l	< 0.03
17	Boron as B	APHA 23rd Edition 4500 B B	mg/l	< 1.0
18	Manganese as Mn	APHA 23rd Edition 3111B	mg/l	< 0.05
19	Iron as Fe	APHA 23rd Edition 3500 Fe B	mg/l	< 0.1
20	Nitrate Nitrogen	APHA 23rd Edition 4500 NO3 B	mg/l	3.42
21	Silver as Ag	APHA 23rdEdition,2017, 3500-Ag	mg/l	<0.01
22	Sulphide as H2S	APHA 23rdEdition,2017, 4500 S2 F	mg/l	<0.05

TEST REPORT

Report No: SAS/W-WW/12/21 - 2431

S. No	Parameter	Method	Unit	S.W-1 Result
23	Mineral Oil	APHA 23rdEdition,2017, 5520 B	mg/l	<0.5
24	Selenium (as Se),	APHA 23rd Edition 3111 B	mg/l	<0.01
25	Anionic detergents (As MBAS)	Annex K of IS 13428	mg/l	<0.2
26	Ammonia as Total Ammonia-N	APHA 23rdEdition,2017, 4500 NH3 B, C	mg/l	<0.5
27	Phenolic Compounds as Phenols	APHA 23rd Edition; 5530 D	mg/l	< 0.001
28	Free Residual Chlorine as Cl	APHA 23rd Edition; 4500 Cl B	mg/l	< 0.01
29	Barium as Ba	APHA 23rdEdition,2017, 3500 Ba	mg/l	<0.2
30	Oil& Grease	APHA 23rd Edition 5520 B	mg/l	<1.0
31	Phosphorus as P	APHA 23rd Edition 4500 P C	mg/l	<1.0
32	Total Coli forms	IS1622	MPN/100ml	21
33	Fecal Coli forms	IS1622	MPN/100ml	4

Opinion and interpretation: Nil

NA: Not Applicable

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Checked by
Sekhar.P
Chemist

Star Analytical Services GUNTUR

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

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MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986
TC-8620

TEST REPORT

Date: 31.12.2021

Name of the Customer:
M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Test Report No :**SAS/W-WW/12/21 – 2438**
Sample particulars : ALDINDI
Sample quantity : 2 Liters
Collected by / date : SAS / 06.12.2021
Sample Registration date : 07.12.2021
Analysis Commenced on : 07.12.2021
Analysis Completed on : 25.12.2021
Sub Contract Testing : NA

S. No	Parameter	Method	Unit	S.W-8 Result
1	pH	APHA 23rd Edition 4500 H+ B	--	7.72
2	Color	APHA 23rd Edition 2120 B	CU	<1.0
3	Turbidity	APHA 23rd Edition 2130 B	NTU	<5.0
4	Total Dissolved Solids	APHA 23rd Edition 2540 C	mg/l	371.1
5	Total Alkalinity (as CaCO3)	APHA 23rd Edition 2320 B	mg/l	182.6
6	Total Hardness (as CaCO3)	APHA 23rd Edition 2340 C	mg/l	262.6
7	Sulphate (as SO_4)	APHA 23rd Edition 4500 SO4 E	mg/l	37.1
8	Chloride (as Cl)	APHA 23rd Edition 4500 Cl- B	mg/l	84.9
9	Lead as Pb	APHA 23rd Edition 3111B	mg/l	< 0.05
10	Cadmium as Cd	APHA 23rd Edition 3111B	mg/l	< 0.01
11	Total Chromium as Cr	APHA 23rd Edition 3111B	mg/l	<0.05
12	Copper as Cu	APHA 23rd Edition 3111B	mg/l	< 0.01
13	Zinc as Zn	APHA 23rd Edition 3111B	mg/l	< 0.5
14	Nickel as Ni	APHA 23rd Edition 3111B	mg/l	< 0.5
15	Fluorides as F	APHA 23rd Edition 4500 F- D	mg/l	< 0.5
16	Aluminum as Al	APHA 23rd Edition 3500 Al B	mg/l	< 0.03
17	Boron as B	APHA 23rd Edition 4500 B B	mg/l	< 1.0
18	Manganese as Mn	APHA 23rd Edition 3111B	mg/l	<0.05
19	Iron as Fe	APHA 23rd Edition 3500 Fe B	mg/l	< 0.1
20	Nitrate Nitrogen	APHA 23rd Edition 4500 NO3 B	mg/l	4.11
21	Silver as Ag	APHA 23rdEdition,2017, 3500-Ag	mg/l	<0.01
22	Sulphide as H2S	APHA 23rdEdition,2017, 4500 S2 F	mg/l	<0.05

TEST REPORT

Report No: SAS/W-WW/12/21 - 2438

S. No	Parameter	Method	Unit	S.W-8 Result
23	Mineral Oil	APHA 23rdEdition,2017, 5520 B	mg/l	<0.5
24	Selenium (as Se),	APHA 23rd Edition 3111 B	mg/l	<0.01
25	Anionic detergents (As MBAS)	Annex K of IS 13428	mg/l	<0.2
26	Ammonia as Total Ammonia-N	APHA 23rdEdition,2017, 4500 NH3 B, C	mg/l	<0.5
27	Phenolic Compounds as Phenols	APHA 23rd Edition; 5530 D	mg/l	< 0.001
28	Free Residual Chlorine as Cl	APHA 23rd Edition; 4500 Cl B	mg/l	< 0.01
29	Barium as Ba	APHA 23rdEdition,2017, 3500 Ba	mg/l	<0.2
30	Oil& Grease	APHA 23rd Edition 5520 B	mg/l	<1.0
31	Phosphorus as P	APHA 23rd Edition 4500 P C	mg/l	<1.0
32	Total Coli forms	IS1622	MPN/100ml	24
33	Fecal Coli forms	IS1622	MPN/100ml	2

Opinion and interpretation: Nil

NA: Not Applicable

1. Reports pertained only to the submitted sample.
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Checked by
Sekhar.P
Chemist

Star Analytical Services GUNTUR

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

ANNEXURE # 2

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
और गंगा संरक्षण विभाग
केन्द्रीय भूमि जल प्राधिकरण
Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)
NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	Surjagarh Iron Ore Mines Of M/s. Lloyds Metals And Energy Ltd		
Project Address:	Surjagarh, Hedri, Pursalgundi, Etapalli, Gadchiroli, Maharastra		
Village:	Surjagad	Block:	Etapalli
District:	Gadchiroli	State:	Maharashtra
Pin Code:			
Communication Address:	Surjagarh, Etapalli, Etapalli, Gadchiroli, Maharashtra - 442704		
Address of CGWB Regional Office :	Central Ground Water Board Central Region, N.s. Building, Civil Lines, Nagpur, Maharashtra - 440001		

1.	**NOC No.:**	CGWA/NOC/MIN/ORIG/2022/14843			
2.	Application No.:	21-4/7585/MH/MIN/2022	3.	Category: (GWRE 2020)	Safe
4.	Project Status:	New Project	5.	NOC Type:	New
6.	**Valid from:**	21/03/2022	7.	**Valid up to:**	20/03/2024

8. Ground Water Abstraction Permitted:

Fresh Water		Saline Water		Dewatering		Total	
m³/day	m³/year	m³/day	m³/year	m³/day	m³/year	m³/day	m³/year
70.00	25550.00						

9. Details of ground water abstraction /Dewatering structures

	Total Existing No.:0						Total Proposed No.:3					
	DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu
Abstraction Structure*	0	0	0	0	0	0	0	0	3	0	0	0

*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit;MPu-Mine Pumps

10.	Ground Water Abstraction/Restoration Charges paid (Rs.):	25550.00

11.	Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.	No. of Piezometers	Monitoring Mechanism		
			Manual	DWLR**	DWLR With Telemetry
	**DWLR - Digital Water Level Recorder	1	0	1	0

(Compliance Conditions given overleaf)

This is an auto generated document & need not to be signed.

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011
Phone: (011) 23383561 Fax: 23382051, 23386743
Website: cgwa-noc.gov.in

Validity of this NOC shall be subject to compliance of the following conditions:

Mandatory conditions:

1) Installation of tamper proof digital water flow meter with telemetry on all the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate.

2) Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year.

3) Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 14 of Guidelines. Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II of the guidelines.

4) Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analysed in NABL accredited laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.

5) In case of mining projects, additional key wells shall be established in consultation with the Regional Director, CGWB for ground water level monitoring four (4) times a year (January, May, August and November) in core as well as buffer zones of the mine.

6) In case of mining project the firm shall submit water quality report of mine discharge/ seepage from Govt. approved/ NABL accredited lab.

7) The firm shall report compliance of the NOC conditions online in the website (www.cgwa-noc.gov.in) within one year from the date of issue of this NOC.

8) Industries abstracting ground water in excess of 100 m 3 /d shall undertake annual water audit through certified auditors and submit audit reports within three months of completion of the same to CGWA. All such industries shall be required to reduce their ground water use by at least 20% over the next three years through appropriate means.

9) Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986.

10) This NOC is subject to prevailing Central/State Government rules/laws/norms or Court orders related to construction of tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.

General conditions:

11) No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose without prior approval of the Central Ground Water Authority (CGWA).

12) The proponent shall seek prior permission from CGWA for any increase in quantum of groundwater abstraction (more than that permitted in NOC for specific period).

13) Proponents shall install roof top rain water harvesting in the premise as per the existing building bye laws in the premise.

14) The project proponent shall take all necessary measures to prevent contamination of ground water in the premises failing which the firm shall be responsible for any consequences arising thereupon.

15) In case of industries that are likely to contaminate the ground water, no recharge measures shall be taken up by the firm inside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm.

16) Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water.

17) Wherever the NOC is for abstraction of saline water and the existing wells (s) is /are yielding fresh water, the same shall be sealed and new tubewell(s) tapping saline water zone shall be constructed within 3 months of the issuance of NOC. The firm shall also ensure safe disposal of saline residue, if any.

18) Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.

19) In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines.

20) This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.

21) The issue of this NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently of the NOC.

22) In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 60 days of taking over possession of the premises.

23) This NOC is being issued without any prejudice to the directions of the Hon'ble NGT/court orders in cases related to ground water or any other related matters.

24) Proponents, who have installed/constructed artificial recharge structures in compliance of the NOC granted to them previously and have availed rebate of upto 50% (fifty percent) in the ground water abstraction charges/ground water restoration charges, shall continue to regularly maintain artificial recharge structures.

25) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, pharmaceutical, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution as per Annexure III of the guidelines.

26) In case of new infrastructure projects having ground water abstraction of more than 20 m3/day, the firm/entity shall ensure implementation of dual water supply system in the projects.

27) In case of infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/harvesting.

28) In case of coal and other base metal mining projects, the project proponent shall use the advance dewatering technology (by construction of series of dewatering abstraction structures) to avoid contamination of surface water.

29) The NOC issued is conditional subject to the conditions mentioned in the Public notice dated 27.01.2021 failing which penalty/EC/cancellation of NOC shall be imposed as the case may be.
30) This NOC is issued subject to the clearance of Expert Appraisal Committee (EAC) (if applicable).

(Non-compliance of the conditions mentioned above is likely to result in the cancellation of NOC and legal action against the proponent.)

MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010706/24010437
Fax:
24044532/4024068/4023516
Website: http://mpcb.gov.in
Email: jdair@mpcb.gov.in

Kalpataru Point, 2nd and 4th floor, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai-400022

RED/L.S.I (R35)
No:- Format1.0/CC/UAN No.0000122378/CO 2111000155

Date: 02/11/21

To,
M/s. LLOYDS METALS AND ENERGY LTD
SURJAGARH IRON ORE MINES
COMPRTMENT NO. 197, 198, 199, 227 AND 228,
Tal. Etapalli, Dist-Gadchiroli, Maharashtra.

Your Service is Our Duty

Sub: Renewal of consent to operate in RED/LSI Category

Ref:

1. Earlier consent to operate for Iron Ore:3 MTPA granted vide No. BO/PCI-II/RO-CH-EIC No. CH-0145-09/3845-09/R/CC-313 dtd.31/07/2009 valid upto 31/03/2013.
2. Consent to operate for Iron Ore: 0.2 MTPA granted vide No. BO/JD(APC)/EIC No. CH-1818-16/UAN No.1271/R/CC-1704000552 dtd.12/04/2017 valid upto 31/03/2021.
3. Environmental Clearance granted by Ministry of Environment & Forest, GoI vide No. J-11015/348/2005-IA.II(M) dtd. 29/05/2006
4. application for renewal of consent vide UAN No. 107155 & UAN No. 122378
5. Decision of 8th Consent Committee meeting held on 11/09/2021
6. Decision of 11th Consent Committee meeting held on 05/10/2021

Your application No.MPCB-CONSENT-0000122378 Dated 24.09.2021

For: grant of Consent to Operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

1. **The consent to operate is granted for a period up to 31/03/2023**
2. **The capital investment of the project is Rs.53.5979 Crs. (As per C.A Certificate submitted by industry (Existing consented CI Rs. 43.91 Cr + Increased in CI by Rs. 9.68 Cr = Rs. 53.5979 Cr))**
3. **Consent is valid for the manufacture of:**

Sr No	Product	Maximum Quantity	UOM
Products			
1	IRON ORE mining over lease ara of 348.09 Ha.	3	MTPA

4. **Conditions under Water (P&CP), 1974 Act for discharge of effluent:**

Sr No	Description	Permitted (in CMD)	Standards to	Disposal Path
1.	Trade effluent	2	As per Schedule-I	Recycle 100% to achieve ZLD
2.	Domestic effluent	7.8	As per Schedule-I	Soaked in soak pit

5. **Conditions under Air (P& CP) Act, 1981 for air emissions:**

Sr No.	Stack No.	Description of stack / source	Number of Stack	Standards to be achieved
1	0	0	0	As per Schedule -II

6. **Non-Hazardous Wastes:**

Sr No	Type of Waste	Quantity	UoM	Treatment	Disposal
1	OVER BURDEN	0	MT/A	PLACED AT EAR MARKED AREA	KEPT IN SEPARATE YARD WITH ALL ENVIRONMENTAL SAFEGUARD MEASURES

7. **Conditions under Hazardous & Other Wastes (M & T M) Rules 2016 for treatment and disposal of hazardous waste:**

Sr No	Category No./ Type	Quantity	UoM	Treatment	Disposal
1	5.1 Used or spent oil	5	KL/A	DISPOSAL TO SPCB AUTHORISED VENDORS	DISPOSAL TO SPCB AUTHORISED VENDORS

8. The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
9. This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities
10. The applicant shall comply with the conditions of the Environmental Clearance granted by Ministry of Environment & Forest, GoI vide No. J-11015/348/2005-IA.II(M) dtd. 29/05/2006 & 07/02/2007
11. Industry shall operate ETP and 100% recycle/ reuse treated effluent so as to achieve ZLD.
12. PP shall provide dry deshelling / manual picking of stray material arrangement also submit a plan for installation of Coal washery within a month.
13. PP shall install minimum CAAQMS arrangement within 03 months.
14. PP shall provide tar road for mineral transportation.
15. PP shall carry out over burden dump management as per CPCB guidelines.
16. PP shall carry out plantation as per EC condition before ensuing monsoon.
17. PP shall provide treatment plant for mine water discharge and submit sedimentation tank design details.
18. PP shall obtain NOC/clarification from CGWA within 03 months.

19. Industry shall extend all existing BGs towards O&M of pollution control systems and towards compliance of the Consent conditions.
20. This consent is issued as per the 11th Consent Committee meeting dated 05/10/2021.
21. Industry shall inform Regional Officer before restarting mining operation.
22. The applicant shall make an application for renewal of consent 60 days prior to date of expiry of the consent. (Operate/Renewal)

For and on behalf of the
Maharashtra Pollution Control Board.

(Ashok Shingare IAS),
Member Secretary

Received Consent fee of -

Sr.No	Amount(Rs.)	Transaction/DR.No.	Date	Transaction Type
1	6500000.00	TXN2109001998	24/09/2021	Online Payment

Rs.30,50,000/- out of above consent fee + Rs. 13,00,100/- submitted vide consent application UAN No. 107155 = Rs. 43,50,100/- balance with Board will be considered during next renewal.

Copy to:

1. Regional Officer, MPCB, Chandrapur and Sub-Regional Officer, MPCB, Chandrapur
   - They are directed to ensure the compliance of the consent conditions.
2. Chief Accounts Officer, MPCB,Sion, Mumbai

SCHEDULE-I

Terms & conditions for compliance of Water Pollution Control:

1. A] As per your application, you have provided Effluent Treatment Plant (ETP) of designed capacity of 8.00 CMD consisting of Primary (Collection tank, Neutralization tank, Equalization tank, Primary Clarifier/Primary Settling Tank), Tertiary (Pressure sand filter, Dual media filter, Activated carbon filter), Sludge treatment (Sludge drying bed) for the treatment of 2 CMD of trade effluent.

   B] The Applicant shall operate the effluent treatment plant (ETP) to treat the trade effluent and recycle the entire treated effluent into the process for various purposes such as for cooling, process & Scrubbing with metering system so as to achieve Zero Liquid Discharge. There shall be no discharge on land or outside factory premises.

   C] The Industry shall ensure connectivity of separate energy meter for pollution control system.

   D] The treated effluent shall be 100% recycled for secondary purposes to the maximum extent and remaining shall be discharged on land for gardening within premise after confirming above standards. In no case, effluent shall find its way for gardening / outside factory premises.

2. A] As per your application, you have provided Septic Tank followed by Soak pit for the treatment of 7.8 CMD of sewage.

   B] The Applicant shall operate the sewage treatment system to treat the sewage so as to achieve the following standards.

Sr.No	Parameters	Standards (mg/l)	
1	BOD (3 days 27°C)	Not to exceed	30
2	COD	Not to exceed	100
3	SS	Not to exceed	50

   C] The treated sewage shall be recycled for secondary purposes to the maximum extent and remaining shall be discharged on land for gardening within premise after confirming above standards. In no case, sewage shall find its way for gardening / outside factory premises.

3. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification there of & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto.
4. The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.

5. The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and as amended, by installing water meters and other provisions as contained in the said act:

Sr. No.	Purpose for water consumed	Water consumption quantity (CMD)
1.	Industrial Cooling, spraying in mine pits or boiler feed	61.25
2.	Domestic purpose	8.75
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	0.00
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	0.00
5.	Gardening	0

6. The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance/ CREP guidelines.

SCHEDULE-II

Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have provided the Air pollution control (APC) system and erected following stack (s) to observe the following fuel pattern:

Stack No.	Source	APC System provided/proposed	Stack Height(in mtr)	Type of Fuel	Sulphur Content(in %)	Pollutant	Standard
NA	NA		0.00	-	-	NA	-

2. The Applicant shall provide Specific Air Pollution control equipments as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance / CREP guidelines.
3. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement/alteration well before its life come to an end or erection of new pollution control equipment.
4. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).
5. Control Equipments
   a. Iron Ore handling plant provided with dust collector & automatic water sprinkler shall be operated
   b. Scientific spraying of water on all working area, dump area, stock piles with the help of appropriate dust suppression system.
   c. Minerals shall be properly covered during transportation.
   d. The applicant shall carry out tree plantation along road side, around dumps or compulsory afforestation as per proposal approved by Forest Department. The tree plantation programme shall be taken up well in advance of the actual mining activity, so that green belt of sufficient width & height is developed between mining area/road and surrounding environment.
   e. Black topped metal roads provided shall be well maintained to prevent dust formation.
   f. Overloading of dumpers shall be avoided to prevent spillages.
   g. Correct type & quantity of explosive shall be used to avoid excess dust formation & vibration in the surrounding area.
   h. The slope of the over burden shall have slope not more than 28° to the horizontal. The overburden shall be properly covered by vegetation for stabilization.
   i. Minerals transportation shall be done by installing conveyors wherever possible & mechanically covered closed trucks shall be used for transportation.
6. Standards for Ambient Air Pollutants:

   The Suspended Particulate Matter (SPM), Respirable Particulate Matter (RPM), Sulphur dioxide (SO_2) and Oxides of Nitrogen (NO_x) concentration in downwind direction considering predominant wind direction, at a distance of 500 metres from the following dust generating sources shall not exceed the standards specified in the table given below:

   Dust Generating Sources:

   Loading or unloading, Haul Road, coal transportation road, Coal handling plant (CHP), Railway Sliding, Blasting, Drilling, Overburden dumps, or any other dust generating external sources like coke ovens (hard as well as soft), briquette industry, nearby road etc.

Pollutant	Time weighted average	Concentration in Ambient Air
Suspended Particulates Matter (SPM)	Annual Average	360 µg/m³
	24 hours	500 µg/m³
Respirable Particulate Matter (size less than 10 µm) (RPM)	Annual Average	180 µg/m³
	24 hours	250 µg/m³
Sulphur Dioxide (SO_2)	Annual Average	80 µg/m³
	24 hours	120 µg/m³
Oxides of Nitrogen as NO_x	Annual Average	80 µg/m³
	24 hours	120 µg/m³

i. In case of any residential or commercial or industrial place falls within 500 metres of any dust generating sources, the National Ambient Air Quality Standards notified vide MOEFCC GOI notification dtd 16.11.2009 as ammended shall be made applicable.

ii. The applicant shall provide minimum three ambient air quality monitoring stations within mining area which should be monitored for SPM, RSPM, SO_2, NOx, HC, CO etc. The Annual Arithmetic Mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval shall conform to the National Ambient Air Quality Standards prescribed under Air (Prevention and Control of Pollution) Act, 1981 and Environment (Protection) Act, 1986. The records of results of monitoring done shall be made available for inspection to the officers of the Board.

7. The applicant shall take adequate measures for control of noise levels from its own sources as follows:

Sr. No	Location	Permissible Norms [in dB (A)]	Desired minimum thickness of green belt (m)
1.	Along Road side	65 (Commercial Area)	20
2.	In colonies	55 (Residential Area)	20
3.	Near Opencast Mines	75 (Industrial Area)	10
4.	Near CHPs	75	30
5.	Near Shaft	75	20
6.	Near Mine exhaust fan	75	> 50

8. Other conditions:

i Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess standards laid down, such information shall be forthwith reported to Board, concerned Police station, office of Directorate of Health services, Dept. of explosives, Inspectorate of Factories & Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.

SCHEDULE-III
Details of Bank Guarantees:

Sr. No.	Consent (C2E/ C2O /C2R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	C to R	Rs.5.0 Lakh	15 days	Operation and Maintenance of pollution control system so as to maintain consented standards prescribed as per Air(Prevention & Control of pollution) Act, 1974 Water (Prevention & Control of Pollution) Act, 1981 & HW (MH & TM) Rules 2016 and also adhering to compliance of specific / general condition of Environment Clearance.	Regular Activity	31/07/2023

BG Forfeiture History

Srno.	Consent (C2E/C2O/C2R)	Amount of BG Imposed	Submission Period	Purpose of BG	Amount of BG Forfeiture	Reason of BG Forfeiture
NA						

BG Return details

Srno.	Consent (C2E/C2O/C2R)	BG Imposed	Purpose of BG	Amount of BG Returned
NA				

SCHEDULE-IV
General Conditions:

1. The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
2. If the MIDC pipeline is broken/ overflowing chamber, in such cases industry shall not discharge their treated effluent into MIDC drain, it shall be sent to CETP by tanker.
3. Industry should monitor effluent quality, stack emissions and ambient air quality monthly/quarterly.
4. The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
5. Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipment, the production process connected to it shall be stopped.
6. The applicant shall provide an alternate electric power source sufficient to operate all pollution control facilities installed to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms and conditions of this consent.
7. The firm shall submit to this office, the 30th day of September every year, the Environmental Statement Report for the financial year ending 31st March in the prescribed Form-V as per the provisions of rule 14 of the Environment (Protection) (Second Amendment) Rules, 1992.
8. The industry shall recycle/reprocess/reuse/recover Hazardous Waste as per the provision contain in the H&OW(M&TM) Rules 2016, which can be recycled/processed/ reused/ recovered and only waste which has to be incinerated shall go to incineration and waste which can be used for land filling and cannot be recycled/ reprocessed etc. should go for that purpose, in order to reduce load on incineration and landfill site/environment.
9. The industry should comply with the Hazardous & Other Wastes (M & TM) Rules, 2016 and submit the Annual Returns as per Rule 6(5) & 20(2) of Hazardous & Other Wastes (M & TM) Rules, 2016 for the preceding year April to March in Form-IV by 30th June of every year.
10. An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
11. The applicant shall make an application for renewal of the consent at least 60 days before the date of the expiry of the consent.
12. Industry shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act,1981 and Environmental Protection Act,1986 and industry specific standard under EP Rules 1986 which are available on MPCB website(www.mpcb.gov.in).
13. The industry shall constitute an Environmental cell with qualified staff/personnel/agency to see the day to day compliance of consent condition towards Environment Protection.

14. Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers downstream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
15. Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
16. The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained.
17. Conditions for D.G. Set
    a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
    b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
    c) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper sitting and control measures.
    d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
    e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
    f) D.G. Set shall be operated only in case of power failure.
    g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
    h) The applicant shall comply with the notification of MoEFCC, India on Environment (Protection) second Amendment Rules vide GSR 371(E) dated 17.05.2002 and its amendments regarding noise limit for generator sets run with diesel.
18. The industry should not cause any nuisance in surrounding area.
19. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
20. The applicant shall maintain good housekeeping.
21. The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a yearly statement by 30th September every year on available open plot area, number of trees surviving as on 31st March of the year and number of trees planted by September end
22. The non-hazardous solid waste arising in the factory premises, sweepings, etc. be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permissions from civic authorities for disposal of solid waste.
23. The applicant shall not change or alter the quantity, quality, the rate of discharge, temperature or the mode of the effluent/emissions or hazardous wastes or control equipment provided for without previous written permission of the Board. The industry will not carry out any activity, for which this consent has not been granted/without prior consent of the Board.

24. The industry shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises
25. The industry shall submit official e-mail address and any change will be duly informed to the MPCB.
26. The industry shall achieve the National Ambient Air Quality standards prescribed vide Government of India, Notification dtd. 16.11.2009 as amended.

For and on behalf of the
Maharashtra Pollution Control Board.

(Ashok Shingare IAS),
Member Secretary

Star Analytical Services

STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017

MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986

TC-8620

TEST REPORT

Report No: SAS/LLMEL/AAQ/12/2045

Name and Address of the Client:

M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Date of Report : 31.12.2021
Sample Collected by : Star Analytical Services
Name of the Location : MINE SITE 01 NEAR MAIN GATE
Sample Condition : Sample received in polythene covers & Sample bottles
Sampling Procedure : CPCB Guidelines (NAAQMS/Volume – I/2013-14)
Sample Description : Ambient Air Quality Monitoring
Sub Contract Test : NA
Environmental Conditions : Weather Condition: Sunny

Date of Monitoring	RESULTS											
	ANALYZED PARAMETERS											
	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO*	O_3	NH_3	Pb	Ni*	As*	C_6H_6*	BaP*
01.12.2021	52.1	20.84	10.22	15.82	0.45	10.85	27.09	<0.5	<1.0	<0.1	<0.1	BDL
02.12.2021	54.9	23.61	12.20	17.40	0.37	13.39	28.00	<0.5	<1.0	<0.1	<0.1	BDL
06.12.2021	53.5	24.61	10.09	15.49	0.41	12.44	31.57	<0.5	<1.0	<0.1	<0.1	BDL
07.12.2021	52.7	20.55	11.46	17.36	0.35	10.98	25.30	<0.5	<1.0	<0.1	<0.1	BDL
11.12.2021	54.1	22.18	13.20	18.80	0.39	11.27	28.67	<0.5	<1.0	<0.1	<0.1	BDL
12.12.2021	55.8	26.78	12.98	18.18	0.43	12.65	27.90	<0.5	<1.0	<0.1	<0.1	BDL
16.12.2021	53.4	22.43	10.47	16.37	0.38	11.13	27.77	<0.5	<1.0	<0.1	<0.1	BDL
17.12.2021	52.8	20.59	9.60	14.70	0.42	13.04	23.76	<0.5	<1.0	<0.1	<0.1	BDL
Limits as per NAAQS	100 µg/m³	60 µg/m³	80 µg/m³	80 µg/m³	2 mg/m³	180 µg/m³	400 µg/m³	1.0 µg/m³	20 ng/m³	06 ng/m³	05 µg/m³	01 ng/m³
Name of the Method	IS 5182: Part 23	As per USEPA	IS 5182: Part 2	IS 5182: Part 6	IS 5182: Part-10 (1999)	IS 5182: Part-IX (1974)	CPCB Manual	IS 5182: Part-22 (2009)	EPA-IO3.2	APHA 23rd edition	IS 5182: Part-11 (2006)	USEPA method (TO-13)

Opinion and interpretation: Nil

NA: Not Applicable

BDL: Below Detectable Limit

Note: "The Parameters marked with a Star "*" are not Under NABL Scope".

Calibration:

Date of Calibration: 21.02.2021(RDS) &21.02.2021(FPS) Due Date: 20.02.2022 (RDS) &20.02.2022 (FPS)

-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

Star Analytical Services GUNTUR

STAR ANALYTICAL SERVICES
(ENVIRONMENTAL MONITORING, TESTING & SERVICES)
Laboratory Accredited by NABL as per ISO/IEC 17025:2017
MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986

TEST REPORT

TC-8620

Report No: SAS/LLMEL/AAQ/12/2046

Name and Address of the Client:

M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Date of Report : 31.12.2021
Sample Collected by : Star Analytical Services
Name of the Location : MINE SITE 02
Sample Condition : Sample received in polythene covers & Sample bottles
Sampling Procedure : CPCB Guidelines (NAAQMS/Volume – I/2013-14)
Sample Description : Ambient Air Quality Monitoring
Sub Contract Test : NA
Environmental Conditions : Weather Condition: Sunny

Date of Monitoring	RESULTS											
	ANALYZED PARAMETERS											
	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO*	O_3	NH_3	Pb	Ni*	As*	C_6H_6*	BaP*
01.12.2021	54.1	21.64	10.61	16.21	0.46	11.27	28.13	<0.5	<1.0	<0.1	<0.1	BDL
02.12.2021	56.9	24.47	12.64	17.84	0.38	13.88	29.02	<0.5	<1.0	<0.1	<0.1	BDL
06.12.2021	55.3	25.44	10.43	15.83	0.41	12.86	32.63	<0.5	<1.0	<0.1	<0.1	BDL
07.12.2021	52.7	20.55	11.46	17.36	0.35	10.98	25.30	<0.5	<1.0	<0.1	<0.1	BDL
11.12.2021	56.4	23.12	13.76	19.36	0.40	11.75	29.89	<0.5	<1.0	<0.1	<0.1	BDL
12.12.2021	51.5	24.72	11.98	17.18	0.35	10.73	25.75	<0.5	<1.0	<0.1	<0.1	BDL
16.12.2021	54.8	23.02	10.75	16.65	0.39	11.42	28.50	<0.5	<1.0	<0.1	<0.1	BDL
17.12.2021	56.1	21.88	10.20	15.30	0.44	12.69	25.25	<0.5	<1.0	<0.1	<0.1	BDL
Limits as per NAAQS	100 µg/m³	60 µg/m³	80 µg/m³	80 µg/m³	2 mg/m³	180 µg/m³	400 µg/m³	1.0 µg/m³	20 ng/m³	06 ng/m³	05 µg/m³	01 ng/m³
Name of the Method	IS 5182: Part 23	As per USEPA	IS 5182: Part 2	IS 5182: Part 6	IS 5182: Part-10 (1999)	IS 5182: Part-IX (1974)	CPCB Manual	IS 5182: Part-22 (2009)	EPA-IO3.2	APHA 23rd edition	IS 5182: Part-11 (2006)	USEPA method (TO-13)

Opinion and interpretation: Nil
NA: Not Applicable
BDL: Below Detectable Limit

Note: "The Parameters marked with a Star "*" are not Under NABL Scope".

Calibration:
Date of Calibration: 21.02.2021(RDS) &21.02.2021(FPS) Due Date: 20.02.2022 (RDS) &20.02.2022 (FPS)

-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

18-21/1, 2nd Floor, Vengalayapalem, Guntur, Guntur Dist., Andhra Pradesh - 522 005.
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TC-8620

TEST REPORT

Report No: SAS/LLMEL/AAQ/12/2047

Name and Address of the Client:

M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Date of Report : 31.12.2021
Sample Collected by : Star Analytical Services
Name of the Location : PERSAL GUNDI
Sample Condition : Sample received in polythene covers & Sample bottles
Sampling Procedure : CPCB Guidelines (NAAQMS/Volume – I/2013-14)
Sample Description : Ambient Air Quality Monitoring
Sub Contract Test : NA
Environmental Conditions : Weather Condition: Sunny

Date of Monitoring	RESULTS – ANALYZED PARAMETERS											
	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO*	O_3	NH_3	Pb	Ni*	As*	C_6H_6*	BaP*
01.12.2021	52.3	20.92	10.25	15.85	0.45	10.90	27.20	<0.5	<1.0	<0.1	<0.1	BDL
02.12.2021	55.6	23.91	12.36	17.56	0.37	13.56	28.36	<0.5	<1.0	<0.1	<0.1	BDL
06.12.2021	54.8	25.21	10.34	15.74	0.42	12.74	32.33	<0.5	<1.0	<0.1	<0.1	BDL
07.12.2021	51.4	20.05	11.17	17.07	0.45	10.71	24.67	<0.5	<1.0	<0.1	<0.1	BDL
11.12.2021	52.7	21.61	12.85	18.45	0.38	10.98	27.93	<0.5	<1.0	<0.1	<0.1	BDL
12.12.2021	54.8	26.30	12.74	17.94	0.37	12.42	27.40	<0.5	<1.0	<0.1	<0.1	BDL
16.12.2021	51.3	21.55	10.06	15.96	0.39	10.69	26.68	<0.5	<1.0	<0.1	<0.1	BDL
17.12.2021	57.5	22.43	10.45	15.55	0.44	13.98	25.88	<0.5	<1.0	<0.1	<0.1	BDL
Limits as per NAAQS	100 µg/m³	60 µg/m³	80 µg/m³	80 µg/m³	2 mg/m³	180 µg/m³	400 µg/m³	1.0 µg/m³	20 ng/m³	06 ng/m³	05 µg/m³	01 ng/m³
Name of the Method	IS 5182: Part 23	As per USEPA	IS 5182: Part 2	IS 5182: Part 6	IS 5182: Part-10 (1999)	IS 5182: Part-IX (1974)	CPCB Manual	IS 5182: Part-22 (2009)	EPA-IO3.2	APHA 23rd edition	IS 5182: Part-11 (2006)	USEPA method (TO-13)

Opinion and interpretation: Nil
NA: Not Applicable

BDL: Below Detectable Limit

Note: "The Parameters marked with a Star "*" are not Under NABL Scope".

Calibration:
Date of Calibration: 21.02.2021(RDS) &21.02.2021(FPS) Due Date: 20.02.2022 (RDS) &20.02.2022 (FPS)

-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

Star Analytical Services GUNTUR

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TC-8620

TEST REPORT

Report No: SAS/LLMEL/AAQ/12/2048

Name and Address of the Client:

M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Date of Report : 31.12.2021
Sample Collected by : Star Analytical Services
Name of the Location : MANGER
Sample Condition : Sample received in polythene covers & Sample bottles
Sampling Procedure : CPCB Guidelines (NAAQMS/Volume – I/2013-14)
Sample Description : Ambient Air Quality Monitoring
Sub Contract Test : NA
Environmental Conditions : Weather Condition: Sunny

Date of Monitoring	RESULTS											
	ANALYZED PARAMETERS											
	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO*	O_3	NH_3	Pb	Ni*	As*	C_6H_6*	BaP*
01.12.2021	55.7	22.28	10.92	16.52	0.47	11.60	28.96	<0.5	<1.0	<0.1	<0.1	BDL
02.12.2021	53.9	23.18	11.98	17.18	0.41	13.15	27.49	<0.5	<1.0	<0.1	<0.1	BDL
06.12.2021	52.1	23.97	9.83	15.23	0.33	12.12	30.74	<0.5	<1.0	<0.1	<0.1	BDL
07.12.2021	57.6	22.46	12.52	18.42	0.44	12.00	27.65	<0.5	<1.0	<0.1	<0.1	BDL
11.12.2021	54.3	22.26	13.24	18.84	0.39	11.31	28.78	<0.5	<1.0	<0.1	<0.1	BDL
12.12.2021	52.8	25.34	12.28	17.48	0.31	13.04	26.40	<0.5	<1.0	<0.1	<0.1	BDL
16.12.2021	54.6	22.93	10.71	16.61	0.35	11.38	28.39	<0.5	<1.0	<0.1	<0.1	BDL
17.12.2021	55.2	21.53	10.04	15.14	0.43	12.50	24.84	<0.5	<1.0	<0.1	<0.1	BDL
Limits as per NAAQS	100 µg/m³	60 µg/m³	80 µg/m³	80 µg/m³	2 mg/m³	180 µg/m³	400 µg/m³	1.0 µg/m³	20 ng/m³	06 ng/m³	05 µg/m³	01 ng/m³
Name of the Method	IS 5182: Part 23	As per USEPA	IS 5182: Part 2	IS 5182: Part 6	IS 5182: Part-10 (1999)	IS 5182: Part-IX (1974)	CPCB Manual	IS 5182: Part-22 (2009)	EPA-IO3.2	APHA 23rd edition	IS 5182: Part-11 (2006)	USEPA method (TO-13)

Opinion and interpretation: Nil
NA: Not Applicable

BDL: Below Detectable Limit

Note: "The Parameters marked with a Star "*" are not Under NABL Scope".

Calibration:

Date of Calibration: 21.02.2021(RDS) &21.02.2021(FPS) Due Date: 20.02.2022 (RDS) &20.02.2022 (FPS)

-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

Star Analytical Services GUNTUR

Star Analytical Services

STAR ANALYTICAL SERVICES

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TC-8620

TEST REPORT

Report No: SAS/LLMEL/AAQ/12/2049

Name and Address of the Client:

M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Date of Report : 31.12.2021
Sample Collected by : Star Analytical Services
Name of the Location : ALDINDI
Sample Condition : Sample received in polythene covers & Sample bottles
Sampling Procedure : CPCB Guidelines (NAAQMS/Volume – I/2013-14)
Sample Description : Ambient Air Quality Monitoring
Sub Contract Test : NA
Environmental Conditions : Weather Condition: Sunny

Date of Monitoring	RESULTS											
	ANALYZED PARAMETERS											
	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO*	O_3	NH_3	Pb	Ni*	As*	C_6H_6*	BaP*
01.12.2021	49.5	19.80	9.71	15.31	0.44	10.31	25.74	<0.5	<1.0	<0.1	<0.1	BDL
02.12.2021	51.2	22.02	11.38	16.58	0.35	12.49	26.11	<0.5	<1.0	<0.1	<0.1	BDL
06.12.2021	48.7	22.40	9.19	14.59	0.32	11.33	28.73	<0.5	<1.0	<0.1	<0.1	BDL
07.12.2021	52.3	20.40	11.37	17.27	0.43	10.90	25.10	<0.5	<1.0	<0.1	<0.1	BDL
11.12.2021	50.8	20.83	12.39	17.99	0.37	12.58	26.92	<0.5	<1.0	<0.1	<0.1	BDL
12.12.2021	48.3	23.18	11.23	16.43	0.43	10.06	24.15	<0.5	<1.0	<0.1	<0.1	BDL
16.12.2021	51.9	21.80	10.18	16.08	0.37	13.81	26.99	<0.5	<1.0	<0.1	<0.1	BDL
17.12.2021	48.4	18.88	8.80	13.90	0.40	11.08	21.78	<0.5	<1.0	<0.1	<0.1	BDL
Limits as per NAAQS	100 µg/m³	60 µg/m³	80 µg/m³	80 µg/m³	2 mg/m³	180 µg/m³	400 µg/m³	1.0 µg/m³	20 ng/m³	06 ng/m³	05 µg/m³	01 ng/m³
Name of the Method	IS 5182: Part 23	As per USEPA	IS 5182: Part 2	IS 5182: Part 6	IS 5182: Part-10 (1999)	IS 5182: Part-IX (1974)	CPCB Manual	IS 5182: Part-22 (2009)	EPA-IO3.2	APHA 23rd edition	IS 5182: Part-11 (2006)	USEPA method (TO-13)

Opinion and interpretation: Nil
NA: Not Applicable

BDL: Below Detectable Limit

Note: "The Parameters marked with a Star "*" are not Under NABL Scope".

Calibration:

Date of Calibration: 21.02.2021(RDS) &21.02.2021(FPS) Due Date: 20.02.2022 (RDS) &20.02.2022 (FPS)

-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

Star Analytical Services GUNTUR

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TEST REPORT

TC-8620

Report No: SAS/LLMEL/AAQ/12/2050

Name and Address of the Client:

M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Date of Report : 31.12.2021
Sample Collected by : Star Analytical Services
Name of the Location : MALAN PAHAD
Sample Condition : Sample received in polythene covers & Sample bottles
Sampling Procedure : CPCB Guidelines (NAAQMS/Volume – I/2013-14)
Sample Description : Ambient Air Quality Monitoring
Sub Contract Test : NA
Environmental Conditions : Weather Condition: Sunny

Date of Monitoring	RESULTS											
	ANALYZED PARAMETERS											
	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO*	O_3	NH_3	Pb	Ni*	As*	C_6H_6*	BaP*
03.12.2021	48.1	19.24	9.43	15.03	0.43	10.02	25.01	<0.5	<1.0	<0.1	<0.1	BDL
04.12.2021	50.8	21.84	11.29	16.49	0.35	12.39	25.91	<0.5	<1.0	<0.1	<0.1	BDL
08.12.2021	49.6	22.82	9.36	14.76	0.32	11.53	29.26	<0.5	<1.0	<0.1	<0.1	BDL
09.12.2021	51.7	20.16	11.24	17.14	0.41	10.77	24.82	<0.5	<1.0	<0.1	<0.1	BDL
13.12.2021	48.5	19.89	11.83	17.43	0.36	13.10	25.71	<0.5	<1.0	<0.1	<0.1	BDL
14.12.2021	52.4	25.15	12.19	17.39	0.43	10.92	26.20	<0.5	<1.0	<0.1	<0.1	BDL
20.12.2021	49.1	20.62	9.63	15.53	0.36	12.23	25.53	<0.5	<1.0	<0.1	<0.1	BDL
21.12.2021	50.3	19.62	9.15	14.25	0.41	11.48	22.64	<0.5	<1.0	<0.1	<0.1	BDL
Limits as per NAAQS	100 µg/m³	60 µg/m³	80 µg/m³	80 µg/m³	2 mg/m³	180 µg/m³	400 µg/m³	1.0 µg/m³	20 ng/m³	06 ng/m³	05 µg/m³	01 ng/m³
Name of the Method	IS 5182: Part 23	As per USEPA	IS 5182: Part 2	IS 5182: Part 6	IS 5182: Part-10 (1999)	IS 5182: Part-IX (1974)	CPCB Manual	IS 5182: Part-22 (2009)	EPA-IO3.2	APHA 23rd edition	IS 5182: Part-11 (2006)	USEPA method (TO-13)

Opinion and interpretation: Nil
NA: Not Applicable
BDL: Below Detectable Limit

Note: "The Parameters marked with a Star "*" are not Under NABL Scope"

Calibration:
Date of Calibration: 21.02.2021(RDS) &21.02.2021(FPS) Due Date: 20.02.2022 (RDS) &20.02.2022 (FPS)

-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

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Manager-Laboratory

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STAR ANALYTICAL SERVICES

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TC-8620

TEST REPORT

Report No: SAS/LLMEL/AAQ/12/2051

Name and Address of the Client:

M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Date of Report : 31.12.2021
Sample Collected by : Star Analytical Services
Name of the Location : BANDE
Sample Condition : Sample received in polythene covers & Sample bottles
Sampling Procedure : CPCB Guidelines (NAAQMS/Volume – I/2013-14)
Sample Description : Ambient Air Quality Monitoring
Sub Contract Test : NA
Environmental Conditions : Weather Condition: Sunny

Date of Monitoring	RESULTS ANALYZED PARAMETERS											
	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO*	O_3	NH_3	Pb	Ni*	As*	C_6H_6*	BaP*
03.12.2021	49.7	19.88	9.75	15.35	0.44	10.35	25.84	<0.5	<1.0	<0.1	<0.1	BDL
04.12.2021	51.6	22.19	11.47	16.67	0.35	12.59	26.32	<0.5	<1.0	<0.1	<0.1	BDL
08.12.2021	50.9	23.41	9.60	15.00	0.42	11.84	30.03	<0.5	<1.0	<0.1	<0.1	BDL
09.12.2021	49.3	19.23	10.72	16.62	0.33	13.27	23.66	<0.5	<1.0	<0.1	<0.1	BDL
13.12.2021	50.1	20.54	12.22	17.82	0.37	10.44	26.55	<0.5	<1.0	<0.1	<0.1	BDL
14.12.2021	52.4	25.15	12.19	17.39	0.44	11.92	26.20	<0.5	<1.0	<0.1	<0.1	BDL
20.12.2021	51.9	21.80	10.18	16.08	0.37	10.81	26.99	<0.5	<1.0	<0.1	<0.1	BDL
21.12.2021	47.8	18.64	8.69	13.79	0.41	9.96	21.51	<0.5	<1.0	<0.1	<0.1	BDL
Limits as per NAAQS	100 µg/m³	60 µg/m³	80 µg/m³	80 µg/m³	2 mg/m³	180 µg/m³	400 µg/m³	1.0 µg/m³	20 ng/m³	06 ng/m³	05 µg/m³	01 ng/m³
Name of the Method	IS 5182: Part 23	As per USEPA	IS 5182: Part 2	IS 5182: Part 6	IS 5182: Part-10 (1999)	IS 5182: Part-IX (1974)	CPCB Manual	IS 5182: Part-22 (2009)	EPA-IO3.2	APHA 23rd edition	IS 5182: Part-11 (2006)	USEPA method (TO-13)

Opinion and interpretation: Nil

NA: Not Applicable

BDL: Below Detectable Limit

Note: "The Parameters marked with a Star "*" are not Under NABL Scope".

Calibration:

Date of Calibration: 21.02.2021(RDS) &21.02.2021(FPS) Due Date: 20.02.2022 (RDS) &20.02.2022 (FPS)

-- End of the report –

Checked by
Sekhar.P
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TC-8620

TEST REPORT

Report No: SAS/LLMEL/AAQ/12/2053

Name and Address of the Client:

M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Date of Report : 31.12.2021
Sample Collected by : Star Analytical Services
Name of the Location : HEDARI
Sample Condition : Sample received in polythene covers & Sample bottles
Sampling Procedure : CPCB Guidelines (NAAQMS/Volume – I/2013-14)
Sample Description : Ambient Air Quality Monitoring
Sub Contract Test : NA
Environmental Conditions : Weather Condition: Sunny

Date of Monitoring	RESULTS											
	ANALYZED PARAMETERS											
	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO*	O_3	NH_3	Pb	Ni*	As*	C_6H_6*	BaP*
03.12.2021	48.2	19.28	9.45	15.05	0.43	10.04	25.06	<0.5	<1.0	<0.1	<0.1	BDL
04.12.2021	50.4	21.67	11.20	16.40	0.35	12.29	25.70	<0.5	<1.0	<0.1	<0.1	BDL
08.12.2021	53.1	24.43	10.02	15.42	0.42	12.35	31.33	<0.5	<1.0	<0.1	<0.1	BDL
09.12.2021	50.9	19.85	11.07	16.97	0.34	10.60	24.43	<0.5	<1.0	<0.1	<0.1	BDL
13.12.2021	52.7	21.61	12.85	18.45	0.43	11.98	27.93	<0.5	<1.0	<0.1	<0.1	BDL
14.12.2021	48.3	23.18	11.23	16.43	0.34	10.06	24.15	<0.5	<1.0	<0.1	<0.1	BDL
20.12.2021	49.5	20.79	9.71	15.61	0.42	13.31	25.74	<0.5	<1.0	<0.1	<0.1	BDL
21.12.2021	51.8	20.20	9.42	14.52	0.41	10.79	23.31	<0.5	<1.0	<0.1	<0.1	BDL
Limits as per NAAQS	100 µg/m³	60 µg/m³	80 µg/m³	80 µg/m³	2 mg/m³	180 µg/m³	400 µg/m³	1.0 µg/m³	20 ng/m³	06 ng/m³	05 µg/m³	01 ng/m³
Name of the Method	IS 5182: Part 23	As per USEPA	IS 5182: Part 2	IS 5182: Part 6	IS 5182: Part-10 (1999)	IS 5182: Part-IX (1974)	CPCB Manual	IS 5182: Part-22 (2009)	EPA-IO3.2	APHA 23rd edition	IS 5182: Part-11 (2006)	USEPA method (TO-13)

Opinion and interpretation: Nil NA: Not Applicable

BDL: Below Detectable Limit

Note: "The Parameters marked with a Star "*" are not Under NABL Scope".

Calibration:

Date of Calibration: 21.02.2021(RDS) &21.02.2021(FPS) Due Date: 20.02.2022 (RDS) &20.02.2022 (FPS)

-- End of the report –

Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T. Krishna Chaitanya
Manager-Laboratory

Star Analytical Services GUNTUR

18-21/1, 2nd Floor, Vengalayapalem, Guntur, Guntur Dist., Andhra Pradesh - 522 005.
Cell : +91 7095734733, +91 8555839439, +91 7893349325, E-mail : info@staranalyticalservices.co.in

Star Analytical Services

STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017

MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986

TC-8620

TEST REPORT

Date: 31.12.2021

Name of the Client:
M/s. Lloyds Metals & Energy Ltd.,
Mouza – Surajagarh, Tehsil – Etapalli,
District – Gadchiroli, Maharashtra.

Report Number : SAS/Noise/21/1532
Sample Particulars : Noise Level Monitoring

S. No	Name of the Location	Date of Monitoring	Category of Area/zone	Day Time In Leq dB (A)	Night Time In Leq dB (A)	CPCB AAQ standards in respect of Noise (Day time)	CPCB AAQ standards in respect of Noise (Night time)
N1	ALDINDI	11.12.2021 To 12.12.2021	Residential Area	51.5	43.7	55dB (A)	45dB (A)
N2	PERSAL GUNDI		Residential Area	53.2	40.9		
N3	EKRA KURD		Residential Area	50.6	41.3		
N4	MANGER		Residential Area	52.7	44.5		
N5	HEDARI		Residential Area	50.9	43.7		
N6	PETTA	20.12.2021 To 21.12.2021	Residential Area	51.4	41.8		
N7	BANDE		Residential Area	53.6	42.1		
N8	MALAN PAHAD		Residential Area	51.7	40.9		
N9	MINE SITE 01 NEAR MAIN GATE		Industrial Area	70.1	53.9	75dB (A)	70dB (A)
N10	MINE SITE 02		Industrial Area	65.8	52.8		

Instrument Details:

S. No	Instrument	Sound Level Meter
1	Make	Lutron
2	Model/S. No	SL – 4010/GE: 2408982
3	Calibrated On	21.02.2021
4	Calibration Due Date	20.02.2022

Opinion and interpretation: Nil NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report –

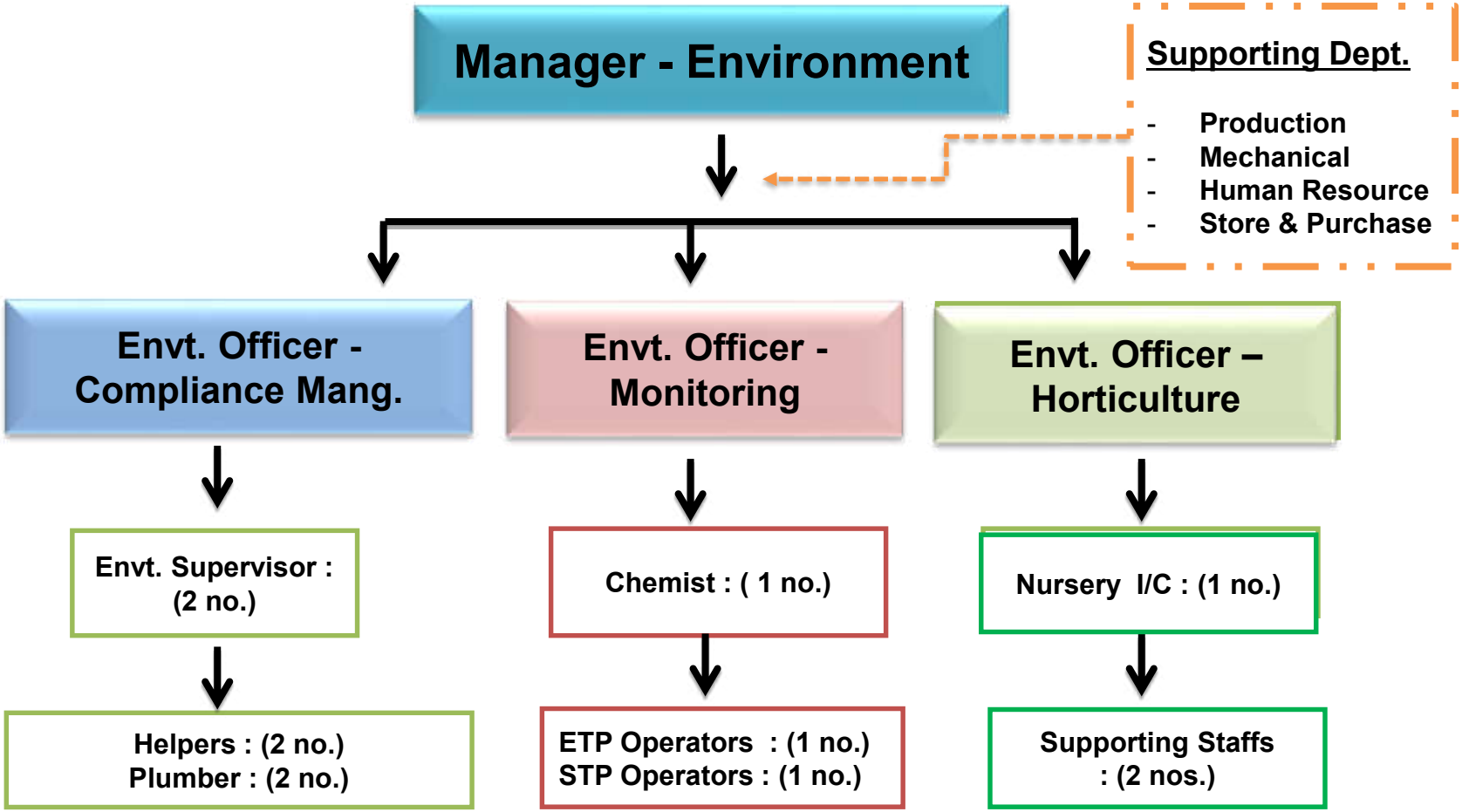
Checked by
Sekhar.P
Sr. Chemist

Authorized Signatory
T.Krishna Chaitanya
Manager-Laboratory

Star Analytical Services GUNTUR

Surjagarh Iron Ore Mines
Lloyds Metals & Energy Ltd.

ORGANIZATION STRUCTURE
ENVIRONMENT CELL



ANNEXURE # 8

FORM O

[See Rule 29 F (2) and 29 L]

Report of Medical Examination Under Rule 29 B

(To be issued in Triplicate)**

CERTIFICATE No. T9840

Certified that Sri/Smt.* employed as Asst. Mechanic SI C.O in mine,

form B No. ..... has been examined for an initial/periodical* medical

examination. He/she* appears to be 27 years of age.

The findings if the examination authority are given in the attached sheet, it is considered that

Sir/Shrimati Chinmaya Kumar Kuna

(a)* is medically fit for any employment in mines

(b)* is suffering from.....and is medically unfit for

(i) any employment in mine, or

(ii) any employment below ground, or

(iii) any employment or work.....

(c)* is suffering from.....and should get this disability* cured/controlled and should be again examined within a period of .....months.

He/She* will appear for re-examined with the result of test of.....and the opinion of .....specialist from.....He/She* may be permitted / not* permitted to carry on his/her duties during this period.

24/11/2024

Dr. Rabi Narayan Kar
Regd. No. 6220 M.B.B.S
Sr. Medical Officer

Signature of the Examining Authority

Name and Designation in Block Letters

Place : **HI-TECH DIAGNOSTIC CENTRE JODA**

Date : 24/11/2024

---

* Delete whatever not applicable

** Original - To be kept with Examining Authority.
Pink Copy - To be handed over to Person Concerned.
Yellow Copy - To be sent to the concerned Manager of the Mine.

FORM 'O' (CONTD.)

Report of the Examining Authority Under rule 29 B

(To be filled in for every medical examination whether initial or periodical or re-xamintion or after cure/control of disabilbty)

Annexure to Certificate No.....as a result of medical examination on.....

Identification mark.....Left thumb impression of the candidate

1. General development: Goods/Fair/Poor

2. Height (in cm.).....3. Weight (in kg.).....

4. Eyes -
   (i) Visual acuity-Distant vision (with or without glasses)
   Right eye.....Left eye.....
   (ii) Any organic disease of eyes.....
   (*iii) Night blindness.....
   (*iv) Colour blindness.....
   (*v) Squint.....
   (* To be tested in special cases)

5. Ears -
   (i) Hearing right ear.....left ear.....
   (ii) Any Organic disease.....

6. Respirator System-
   Chest Measurement :
   (i) After full inspiration.....cms.
   (ii) After full expiration.....cms.

7. Circulatory system-
   Blood pressure.....pulse.....

8. Abdomen -
   Tenderness.....Liver.....
   Spleen.....Tumour.....

9. Nervous System -
   History of fits or epilepsy.....
   Paralysis.....
   Mantal Health.....

10. Locomotor system.....
11. Skin.....
12. Hernia.....
13. Hydrocele.....
14. Any other abnormality.....
15. Urine
    Reaction.....Albumin.....Sugar.....
16. Skiagram of chest.....
17. Any other test considered necessary by the examining authority.....
18. Any opinion of specialist considered necessary.....
19. Spirometry
20. Lung Function Test
21. ECG

Haematological Test

TC Hb% Blod Group

DC

Neutrophil.....%
Lymphocyte.....%
Monocyte.....%
Eosinophils.....%
Basophils.....%

ESR.....

Platalet Count.

Blood Sugar

Fasting.....mg%
P.P.....mg%
Randam.....mg%
Blood Urea.....mg%
Serum Creatinine.....mg%
Serum Cholostrol.....mg%
, lipid profile

Dr. Rabi Narayan Kar
Regd. No. 6220 M.B.B.S
Sr Medical Officer
Thriveni Earthmovers

Signature of the Examining

Place: JODA

HI-TECH DIAGNOSTIC CENTRE

(UNIQUE IN THE DISTRICT OF KEONJHAR)

REGISTRATION NUMBER: 1071/2008

BANSPANI ROAD, NEAR MAA MANGALA TEMPLE

JODA-758034, KEONJHAR DISTT, ORISSA

Certificate No	T 9840

Date	24.11.21

Name	Mr.CHINMAYA KUMAR KUNAR	Age	26 Years	Sex	Male

PATHOLOGICAL INVESTIGATION REPORT

	SI	TEST	RESULT	DESIREABLE RANGE
1.BLOOD TEST	01	DC Neutrophil	**56**	40 -75 %
		Lymphocyte	**36**	20 - 45 %
		Eosinophil	**07**	02- 09 %
		Basophil	**00**	00 - 01 %
		Monocyte	**01**	02- 08 %
	02	ESR	**16**	00 - 20 mm (1st hour)
	03	Hemoglobin	**11.4**	11.0 - 16.5 gm%
	04	Blood Group	**"A" Positive**	
2.TOTAL COUNT	01	TWBC	**5300**	4,000 – 10,000 / Cmm
	02	TRBC	**3.80**	3.5 - 6.5 million/Cmm
	03	Total Platelet	**2.43**	150000 -350000 cells/cu mm
COMPLETE LIPID PROFILE				**MALE** **FEMALE**
	01	CHOLESTEROL	**161**	up to 260 mg/dl up to 220
	02	TRIGLYCERIDE	**160**	60 – 165 mg/dl 40- 140
	03	HDL- CHOLESTEROL	**48**	30 – 70 mg/dl 35 - 90
	04	VLDL- CHOLESTEROL	**32**	Up to 35 mg/dl up to 30
	05	LDL- CHOLESTEROL	**81**	Up to 150 mg/dl up to 130
	06	TOTAL / HDL-c Ratio	**3.35**	< 5.0 < 4.5
	07	LDL / HDL-c Ratio	**1.68**	< 3.5 < 3.2
DIABETIC PROFILE	01	Fasting Blood Sugar	**81**	70 – 110 mg/dl
	02	Post P. Blood Sugar	**104**	70 – 150 mg/dl
RENAL PROFILE	01	Blood Urea	**27**	10 – 45 mg/dl
	02	Serum Creatinine	**0.74**	0.5 – 1.5 m/dl

URINE EXAMINATION

Colour	: **Pale yellow**	Sugar(F)	: **Nil**	Nitrate	: **Negative**
Appereance	: **Clear**	Albumin	: **Nil**	Ketone Bodies	: **Negative**
S.G	: **1.025**	Bilirubin	: **Negative**	Urobilinogen	: **Negative**
pH	: **5.0**	Blood	: **Negative**		

MICROSCOPIC EXAMINATION

Pus Cells : 01 to 02 / HPF Epithelial Cells: 00 to 01 / HPF

Report of Medical Examination as per the recommendation of National Safety Conference in Mines

(To be used in continuation with Form O)

Date: 24.11.2021

Certificate No : T 9840

Name : Mr. CHINMAYA KUMAR KUNAR

Age / Sex : 26 Yrs / Male

Identification Marks : one black mole on Rt side neck

: one black mole on Rt scapular region

1 Cardiological Assessment

Auscultation	S1	Normal
	S2	Normal
	Additional Sound	Nil
Electrocardiograph(12 leads) findings:		Normal / Abnormal

Enclosed ECG

2 Neurological Assessment

Finding	Normal / Abnormal
Superficial Reflexes	Normal
Deep Reflexes	Normal
Peripheral Circulation	Normal
Vibration	Normal

3 ILO Classification of Chest Radiograph :

Profusion of Pneumoconiotic opacities	Grades	Type
Present / Absent	–	–

Enclosed Chest Radiograph

24/11/2021

Dr. Rabi Narayan Kar
Regd. No. 6220
Sr Medical Officer
Triveni Earthmovers (P) Ltd

HI-TECH DIAGNOSTIC CENTRE

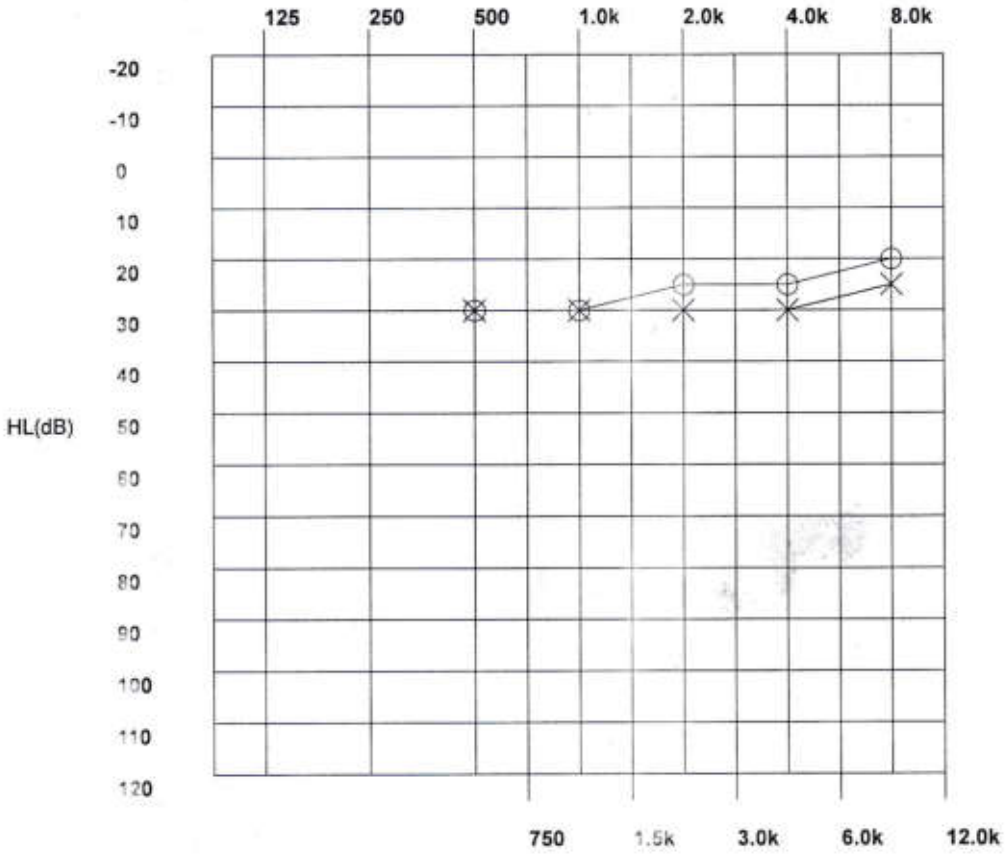
JODA-758034,DIST-KEONJHAR,ORISSA

PATIENT'S NAME:- CHINMAY KUMAR KUNAR

PATIENT'S ADDRESS:-
T 9840

AGE:- 26 YRS SEX:- MALE

Date:- 24.11.21



SYMBOL CHART

- L-AC
- R-AC
- L-BC
- R-BC
- L-AC[M]
- R-AC[M]
- L-BC[M]
- R-BC[M]

COMMENTS:- WNL

DOCTOR/AUDIOLOGIST:-

HI-TECH DIAGNOSTIC CENTRE
JODANI ROAD
OPPOSITE TO MAA MANGALA TEMPLE
JODA, DIST.: KEONJHAR
758 034

T 9840
C K Munar
..... Male
31 years
..... cm / ..... kg

HR 81/min

Intervals:
RR 743 ms
P 92 ms
PR 152 ms
QRS 80 ms
QT 318 ms
QTC 370 ms

Axis:
P 60 °
QRS 57 °
T 25 °

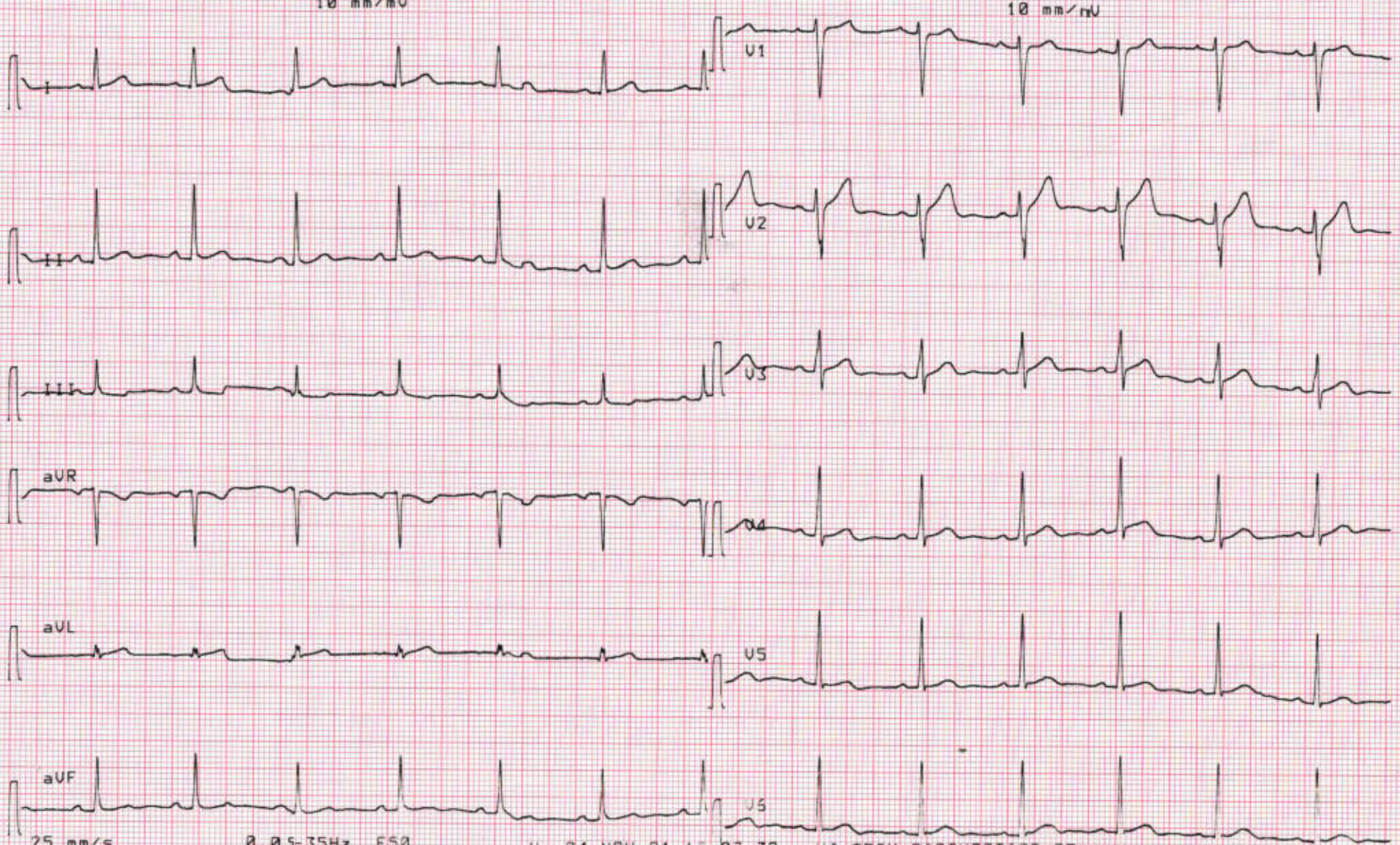
P (II) 0.11 mV
S (V1) -1.26 mV
R (V5) 1.51 mV
Sol. 2.77 mV

SINUS RHYTHM
NORMAL ECG

5.79

UNCONFIRMED REPORT

10 mm/mV



25 mm/s 0.05-35Hz F50 We 24-NOV-21 12:07:39 HI-TECH DIAGNOSTICS CENTER AT-102 1.37 0 ms

SCHILLER

Part No 2.157025M