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No. JSW/S/CO/2024/430

Date: 19/09/2025

To,
The Member Secretary
State Pollution Control Board, Odisha
Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8,
BHUBANESHWAR - 751012

Sub: - Submission of Environment Statement (Form-V) for the year 2024-25 in compliance of EC & CTO Condition for Jajang Iron Ore Mine of M/s JSW Steel Ltd.

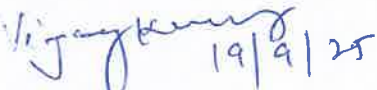
Ref: - 1. Vested Environment Clearance Letter dated 13.03.2015 and amendment dated 09.11.2015 issued by MOEF&CC, GOI.
2. Consent Order No 2942 vide letter no 6972/IND-I-CON-247 dated 31.03.2025.

Dear Sir,

With reference to aforesaid subject, please find enclosed herewith the Environment Statement (Form-V) for the year 2024-25 in compliance of EC & CTO Condition for Jajang Iron Ore Mine of M/s JSW Steel Ltd.

Seeking your co-operation as always.

For JSW Steel Ltd


Vijay Kumar

(Authorized Signatory)

Encl: As above

Copy to-

1. The Member Secretary, State Level Environment Impact Assessment Authority, 5RF-2/1, Acharya Vihar, Unit IX, OPTCL Colony, Anand Bazar, Bhoi Nagar, Bhubaneswar, Odisha 751022.
2. The Regional Officer, Regional Office, State Pollution Control Board, Keonjhar, At – Baniapat, College Road, Keonjhar-758 001, Office of the State Pollution Control Board, Odisha



**JSW Steel Limited
Jajang Iron Ore Mine**



**ENVIRONMENTAL STATEMENT FOR
JAJANG IRON ORE MINE
(FINANCIAL YEAR ENDING MARCH 31ST 2025)**

PREPARED & SUBMITTED BY

**Jajang Iron Ore Mine
Of M/s JSW Steel Ltd
Tehsil - Barbil, District – Keonjhar
Odisha**

Form V
(See Rule 14)

Environment Statement for the Financial Year ending the 31st March 2025
(Please note that mining operations of the said project ceased w.e.f. 30.11.2024)

Part A

(i)	Name and address of the owner/occupier of the industry operation or process	Jajang Iron Ore Mine of M/s JSW Steel Ltd in villages Jajang, Jodibahal, Palsa (Ka), Bandhuabeda, Tehsil Barbil, District Keonjhar, Odisha
(ii)	Industry Category Primary :- (STC Code) Secondary :- (SIC Code)	Red Category SIC (Standard Industrial Classification)- Code-1000 Industry Type- Metal Mining
(iii)	Production capacity: Units	CTO of 12.80 MTPA Iron Ore (ROM). <u>Please note that mining operations of the said project ceased w.e.f. 30.11.2024</u>
(iv)	Year of establishment	Mining operation commenced from the 01.07.2020
(v)	Date of the last Environment Statement Submitted	16/09/2024

Part B

Water and Raw Material Consumption

(i)	Water consumption m ³ /d	
	Process (Spraying in Mine pit or Haul Road Dust Suppression or dry fog dust suppression) *	538 m ³ /day**
	Cooling	Nil
	Domestic (Drinking purpose)	182 m ³ /day

Note: * Spraying in mine pit or haul road dust suppression is not exactly a process driven parameter, which is linked with the extent of haul road in usage during mining operation.

**Maximum Rain water collected in the mine pits being reused for dust suppression purpose.

Name of Product	Process water consumption per unit of product output(cum/MT)	
	During the previous financial year	During the current financial year
	(1)	(2)
Iron Ore	0.02	0.03

Raw material consumption: - Not Applicable

Name of raw material	Name of products	Consumption of raw material per unit of output MT	
		During the previous financial year	During the current financial year
Not Applicable			

Polluting Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw material used.

PART-C

Pollution discharged to environment/ unit of output
(Parameter as specified in the consent issued)

Pollutants	Qty. of pollutants discharged (mass/day)	Concentrations of pollutants in discharged (mass/volume)	Percentage of variation from prescribed standard with reason
(a) Water	No effluent was generated as no industrial process was involved in the mining operation. However, the surface run-off from the mine complied with all prescribed limits. An ETP with an Oil & Grease Trap with complete recirculation system was in place. The surface run off water quality is enclosed as Annexure 1 .		
(b) Air	There were no point sources of emissions or process stacks releasing pollutants into the environment. Ambient air quality was monitored at four core zone and four buffer zone locations in accordance with NAAQS-2009, and the results remain well within the prescribed standards. The consolidated environmental monitoring data for FY 2024-25 is enclosed as Annexure-I .		

PART- D**HAZARDOUS WASTES**

(As specified under Hazardous Wastes / Management and Handling Rules, 1989)

Hazardous Wastes	Total Quantity (T)	
	During the previous financial year	During the current financial year
(a) From process	69.97	95.58872
(b) From pollution control	NA	Nil

PART- E**Solid Wastes**

	Total Quantity	
	During the previous financial year	During the current financial year
(a) From process	Over Burden- 3745017 m ³	Over Burden- 1480568 m ³
(b) From pollution control		Not Applicable
(c) (1) Quantity recycled or re-utilized within the unit		Nil
(2) Sold		Nil
(3) Disposed		Overburden is disposed at ear marked area in of the mine as per Approved Mine Plan.

PART-F

Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both the categories of wastes.

Solid Waste- Overburden of 1480568 m³ was generated during the reporting period. The OB/Waste was disposed of at the earmarked area as per approved mine plan.

Hazardous Waste- Used Oil- Hazardous waste of 95.58872 Tonnes was generated during the reporting period. The hazardous waste was being stored in a hazardous waste shed and was sold to an approved hazardous waste recycler.

PART-G**Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.**

Our aim is to preserve the long- term health of the natural environment affected by our operations. We set and achieve targets that promote efficient use of resources and include the reduction and prevention pollution.

**Air Management-
Blasting Operation**

- Controlled Blasting was adopted and optimum use of explosive energy help in reducing the air pollution.
- Adequate booster/primer were used and proper stemming of the blast hole were done to reduce the production of noxious gases during blasting.
- The drilling, charging, stemming and blasting operations were carried out under direct personal supervision of Manager/Asst. Manager. He maintained the records of blasting parameters for every blast.
- To control ground vibrations and arrest fly rocks, advanced initiation system was used for blasting.
- Ground vibrations were also monitored and the results were well within limits.

Excavation, Hauling and Crushing & Screening

- Dry fog system for crusher & screen plants were provided.
- Using sharp teeth for shovels and other soil excavation equipment, and their periodical replacements.
- Acoustic enclosures for operator cabin.
- Avoiding overloading of dumpers
- Provision of dust filters / masks to workers working at highly dust prone and affected areas
- Imparting sufficient training to operators on safety and Environmental parameters.

Transportation

- Regular water sprinkling was carried out by engaging 5 mobile water tankers (3x16KL, 1x18KL and 1x25 KL) on the mine benches, mine haul, loading and unloading points and transfer points for dust suppressions. In addition to this, 4

mobile water tankers (4x12KL) were used on the mineral transportation roads for dust suppressions outside the mine area.

- Maintenance of haul road by regular grading was carried out through grader, dozer.
- Ensuring that all mineral trucks were covered by tarpaulin.
- Vehicular emissions controlled through regular and proper preventive maintenance schedules.
- It was ensured that there was no overloading of trucks by having Quick Dispatch system at the weigh bridge near the dispatch gate.
- Regular water sprinkling arrangements were made on the transportation roads/public road through mobile water tankers.
- Tarpaulin Covering in Railway Wagons.



Wet Drilling and Dust Extractor System in Drilling Operation



Quick Dispatch System



Water Tanker Arrangement for Haul Road Dust Suppression



Dry Fog System in Mineral Handling Plants



Tarpaulin Covering on the Railway Wagons



Electronic Digital Display Board near Jajang Mine Gate No 6

Water & OB Management

- Garland drains maintained of suitable size around mine area and dump with proper gradients to prevent rain water descent into active mine area.
- Settling ponds maintained to prevent flow of fine particles from OB / Waste dumps, check dams, parapet / retaining walls & garland drains.
- Usage of stored water in the settling ponds for watering of haul roads, vehicle washing and green belt development etc.
- De- silting of garland drains & settling ponds was carried out at regular intervals.
- Maintenance of all the runoff management structures.



Retaining Wall, Coir Matting & Plantation on Backfilled Area 2



Check Dam near railway siding



Wheel Washing System near Gate No 6.



Plantation on OB Dump no 2



Plantation in Safety Zone near Gate No 2



Plantation in Safety Zone and Road Side Plantation



Orchard in Jajang Mine

Noise Management

- Providing sound proof operator's cabin for equipment like dumpers, shovel, tippers, etc.
- All HEMMs are monitored for any abnormal sound and rectified with due precaution by maintenance personnel.
- Providing workers with ear muffs & earplugs against high noise levels.
- Controlling the time of exposure of workers towards high noise areas.

PART-G**Additional measures/investment proposal for environment protection including abatement of pollution /prevention of pollution.**

Jajang Environmental Protection Measures Expenditure (head wise breakup) incurred from in FY 2024-25 is given below-

Expenditure Incurred on Environmental Protection Measures for the Financial Year 2024-25		
S. No.	Expenditure head -Particulars	Cost incurred in INR
1	Construction of Retaining walls	810000
2	Construction of Garland drains, desiltation of settling ponds	525000
3	Geotextile works for dump stabilization	1113000
5	Greenbelt development- Pit digging, plantation and maintenance	2068080
6	Operation of Road sweeping machines	3720000
7	Operation of fixed sprinklers	50000
8	Operation of mobile sprinklers	7260576
9	Use of chemical dust suppressants in sprinkling	472000
10	Online air quality monitoring	657434.64
11	Environment monitoring through NABL Accredited third party	1066931
12	Installation of Sewage treatment Plant	-
13	Study conducted on hydrogeology from CGWA Accredited Agency	410000

14	Nursery Development	1813000
15	Landscape development	-
16	Environmental Awareness Programmes	250000
17	Flowmeter calibration and stamping	63000
18	Drip irrigation for plantation	-
Total		20279021.64

PART-H

Any other particular for improving the quality of the environment.

- Company is committed for prevention/abatement of pollution and minimize adverse environmental impacts of the business by ensuring continual improvement of environmental performance, and complying to the relevant environmental and other legislation, regulation & other requirements.
- The mine had already been certified with ISO-14001 (Environment Management System), ISO-9001 (Quality Management System) and OHSAS-45001 (Occupational Health and Safety Assessment Series) and maintaining the systems satisfactorily.

Environmental Monitoring

Regular monitoring of important and crucial environmental parameters is of immense importance to assess the status of environment during plants operation. With the knowledge of baseline conditions, the monitoring program can serve as an indicator for any deterioration in environmental conditions due to operation of the plants and suitable preventive steps could be taken in time to safeguard the environment. Monitoring is as important as that of control of pollution since the efficiency of control measures can only be determined by monitoring.

The environmental attributes being monitored are as given below:

- Air Pollution and Meteorological Aspects
- Surface and Ground Water Quality
- Noise Levels
- Soil Quality

Annexure 1

Consolidated Air Quality Monitoring Data of FY 2024-2025

JAJANG IRON ORE MINES										
AAQ DATA FOR THE PERIOD APRIL 2024 TO MARCH 2025										
	PM10 [$\mu\text{g}/\text{m}^3$]		PM2.5 [$\mu\text{g}/\text{m}^3$]		SO2 [$\mu\text{g}/\text{m}^3$]		NO2 [$\mu\text{g}/\text{m}^3$]		CO [mg/m^3]	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
CORE ZONE										
Mines Office	76.9	61	24.9	18.2	18.9	16.2	18.8	15.0	0.64	0.55
Entry & Exit Gate No.-06	74.8	65.3	23.4	18.6	22.7	16.2	19	15.5	0.55	0.52
Residential Colony	74.2	64.1	24.9	18.7	18.9	16.2	18.4	15.1	0.61	0.39
Work Shop Area	72.4	51.3	24.5	18	18.9	15.1	18.9	11.3	0.54	0.40
BUFFER ZONE										
Jajang Village	53.5	39.5	14.92	16.4	13.8	18.7	14.5	13.1	0.41	0.35
Jaribahal Village	47.6	40.2	20.2	14.3	15.1	12.2	16.5	13.5	0.39	0.28
Bandhuabeda Village	45.5	42.1	19.6	13.2	15.9	13.5	16	11.1	0.47	0.42
Kamalpur Village	55.7	41.2	18.2	13.6	13.1	11.2	14.6	11.2	0.44	0.39
NAAQ (24hr standard)	100 [$\mu\text{g}/\text{m}^3$]		60 [$\mu\text{g}/\text{m}^3$]		80 [$\mu\text{g}/\text{m}^3$]		80 [$\mu\text{g}/\text{m}^3$]		2 [mg/m^3] (2 hourly)	



TEST REPORT

FORMAT NO. ECO/OS/FORMAT/07

NAME & ADDRESS OF CUSTOMER:	Jajang Iron Ore Mines M/s JSW Steel Ltd.	ULR No.	TC127512400000502F
		Test Report No.	ECO/LAB/SW/0102/0502/09/2024
		Issue Date of Test Report	08.10.2024
Type of Sample	Surface Water		
Sample Registration No.	0102	Name of Location	Mines Runoff Workshop Area
Sampling Method	APHA	Sample Collected By	EMPL Representative
Date of Sample Collection	18.09.2024	Time of Sample Collection	-
Date of Sample Received	18.09.2024	Time of Sample Received	05:40 PM
Start Date of Analysis	18.09.2024	End Date of Analysis	08.10.2024
Laboratory Environmental Condition	Temperature: 27 ± 2 °C	Sample Quantity	As Per Requirement
	Humidity: 55 %	Sample ID Code	ECO/LAB/0502/09/2024

Sr. No.	TESTS	Unit	PROTOCOL	DETECTION RANGE	RESULT	INDIAN STANDARDS as IS-2296(C)
1.	Colour	Hazen	APHA, 23rd Ed. : 2017, 2120 B	5 -100	15.0	300
2.	pH	-	APHA, 23rd Ed. : 2017, 4500H+A+B	2 - 12	6.75	6.5-8.5
3.	Total Suspended Solids as TSS	mg/l	APHA, 23rd Ed. : 2017, 2540-D	5-5000	35.0	-
4.	Total Dissolved Solids as TDS	mg/l	APHA, 23rd Ed. : 2017, 2540-C	5 - 5000	178.0	1500
5.	Biochemical Oxygen Demand as BOD	mg/l	APHA, 23rd Ed. : 2017, 5210 A+B	1 -1000	2.7	3.0
6.	Chemical Oxygen Demand as COD	mg/l	APHA, 23rd Ed. : 2017, 5210 A+B	1 -1000	20.0	-
7.	Oil & Grease as O&G	mg/l	APHA, 23rd Ed. : 2017,5520 A+D	5-600	BDL	0.1
8.	Dissolved Oxygen as DO	mg/l	APHA, 23rd Ed. : 2017, 4500 A+C	1 -15	6.0	4
9.	Chloride as Cl	mg/l	APHA, 23rd Ed. : 2017, 4500 Cl A+B	5 - 1000	20.0	600
10.	Sulphate as SO4	mg/l	APHA, 23rd Ed. : 2017, 4500-SO42- E	1 - 250	16.2	400
11.	Nitrate Nitrogen as NO3	mg/l	APHA, 23rd Ed. : 2017, 4500-NO3 2- E	5 - 100	BDL	50
12.	Fluoride as F	mg/l	APHA, 23rd Ed. : 2017, 4500-C	0.05 -10	0.29	1.5
13.	Iron as Fe	mg/l	APHA, 23rd Ed. : 2017, 3500 Fe B	0.02-50	0.10	50.0
14.	Arsenic as As	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.01-2	BDL	0.2
15.	Hexavalent Chromium as Cr+6	mg/l	APHA, 23rd Ed. : 2017,3111 A+B	0.05-20	BDL	0.05
16.	Copper as Cu	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.05-5	BDL	1.5
17.	Zinc as Zn	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.02-50	0.06	15
18.	Phenolic Compound as C6H5OH	mg/l	APHA, 23rd Ed. : 2017, 5530 A+C	0.05 - 10	BDL	0.005
19.	Anionic Detergent as MBAS	mg/l	APHA, 23rd Ed. : 2017,5540 A+C	0.01-5	BDL	1.0
20.	Lead as Pb	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.01-1	BDL	0.1
21.	Cadmium as Cd	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.002-2	BDL	0.01
22.	Total coliform	MPN/100 ml	APHA, 23rd Ed. : 2017, 9221 A+B	1.8	90.0	5000

Statement of Conformity: The above tested parameters confirm as per IS-2296 Class-C limits for above tested parameters and the results are related to the sample tested.

Note: - BDL- Below Detection Limit

Verified By

Technical Manager

Authorized By

Quality Manager



TEST REPORT

FORMAT NO. ECO/OS/FORMAT/07

NAME & ADDRESS OF CUSTOMER:	Jajang Iron Ore Mines M/s JSW Steel Ltd.	ULR No.	TC127512400000503F
		Test Report No.	ECO/LAB/SW/0102/0503/09/2024
		Issue Date of Test Report	08.10.2024
Type of Sample	Surface Water		
Sample Registration No.	0102	Name of Location	Mines Runoff Hatipit Area Road
Sampling Method	APHA	Sample Collected By	EMPL Representative
Date of Sample Collection	18.09.2024	Time of Sample Collection	-
Date of Sample Received	18.09.2024	Time of Sample Received	05:40 PM
Start Date of Analysis	18.09.2024	End Date of Analysis	08.10.2024
Laboratory Environmental Condition	Temperature: 27 ± 2 °C	Sample Quantity	As Per Requirement
	Humidity: 55 %	Sample ID Code	ECO/LAB/0503/09/2024

Sr. No.	TESTS	Unit	PROTOCOL	DETECTION RANGE	RESULT	INDIAN STANDARDS as IS-2296(C)
1.	Colour	Hazen	APHA, 23rd Ed. : 2017, 2120 B	5 -100	20.0	300
2.	pH	-	APHA, 23rd Ed. : 2017, 4500H+A+B	2 - 12	6.98	6.5-8.5
3.	Total Suspended Solids as TSS	mg/l	APHA, 23rd Ed. : 2017, 2540-D	5-5000	29.0	-
4.	Total Dissolved Solids as TDS	mg/l	APHA, 23rd Ed. : 2017, 2540-C	5 - 5000	217.0	1500
5.	Biochemical Oxygen Demand as BOD	mg/l	APHA, 23rd Ed. : 2017, 5210 A+B	1 -1000	3.0	3.0
6.	Chemical Oxygen Demand as COD	mg/l	APHA, 23rd Ed. : 2017, 5210 A+B	1 -1000	22.0	-
7.	Oil & Grease as O&G	mg/l	APHA, 23rd Ed. : 2017, 5520 A+D	5-600	BDL	0.1
8.	Dissolved Oxygen as DO	mg/l	APHA, 23rd Ed. : 2017, 4500 A+C	1 -15	5.7	4
9.	Chloride as Cl	mg/l	APHA, 23rd Ed. : 2017, 4500 Cl A+B	5 - 1000	24.0	600
10.	Sulphate as SO4	mg/l	APHA, 23rd Ed. : 2017, 4500-SO42- E	1 - 250	16.5	400
11.	Nitrate Nitrogen as NO3	mg/l	APHA, 23rd Ed. : 2017, 4500-NO3 2- E	5 - 100	BDL	50
12.	Fluoride as F	mg/l	APHA, 23rd Ed. : 2017, 4500-C	0.05 -10	0.31	1.5
13.	Iron as Fe	mg/l	APHA, 23rd Ed. : 2017, 3500 Fe B	0.02-50	0.15	50.0
14.	Arsenic as As	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.01-2	BDL	0.2
15.	Hexavalent Chromium as Cr+6	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.05-20	BDL	0.05
16.	Copper as Cu	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.05-5	BDL	1.5
17.	Zinc as Zn	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.02-50	0.04	15
18.	Phenolic Compound as C6H5OH	mg/l	APHA, 23rd Ed. : 2017, 5530 A+C	0.05 - 10	BDL	0.005
19.	Anionic Detergent as MBAS	mg/l	APHA, 23rd Ed. : 2017, 5540 A+C	0.01-5	BDL	1.0
20.	Lead as Pb	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.01-1	BDL	0.1
21.	Cadmium as Cd	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.002-2	BDL	0.01
22.	Total coliform	MPN/100 ml	APHA, 23rd Ed. : 2017, 9221 A+B	1.8	102	5000

Statement of Conformity: The above tested parameters confirm as per IS-2296 Class-C limits for above tested parameters and the results are related to the sample tested.

Note: - BDL- Below Detection Limit

Verified By

Technical Manager

Authorized By

Quality Manager



ECOMEN MINING PVT. LTD
(Formerly known as Ecomen Laboratories Pvt. Ltd.)

Second Floor Hall, House No. B-1/8, Sector-H, Allganj, Lucknow - 226 024

Phone No. : 0522 - 4079201/2746282

E-mail: contactus@ecomen.in, Website: www.ecomen.in, CIN - U74210UP1989PTC010601, GSTIN : 09AAACE6076H1ZI



TEST REPORT

FORMAT NO. ECO/QS/FORMAT/07

NAME & ADDRESS OF CUSTOMER:	Jajang Iron Ore Mines M/s JSW Steel Ltd.	ULR No.	TC127512400000504F
		Test Report No.	ECO/LAB/SW/0102/0504/09/2024
		Issue Date of Test Report	08.10.2024
Type of Sample	Surface Water		
Sample Registration No.	0102	Name of Location	Mines Runoff Jone one area
Sampling Method	APHA	Sample Collected By	EMPL Representative
Date of Sample Collection	18.09.2024	Time of Sample Collection	-
Date of Sample Received	18.09.2024	Time of Sample Received	05:40 PM
Start Date of Analysis	18.09.2024	End Date of Analysis	08.10.2024
Laboratory Environmental Condition	Temperature: 27 ± 2 °C	Sample Quantity	As Per Requirement
	Humidity: 55 %	Sample ID Code	ECO/LAB/0504/09/2024

S\ No.	TESTS	Unit	PROTOCOL	DETECTION RANGE	RESULT	INDIAN STANDARDS as IS-2296(C)
1.	Colour	Hazen	APHA, 23rd Ed. : 2017, 2120 B	5-100	25.0	300
2.	pH	-	APHA, 23rd Ed. : 2017, 4500H+A+B	2 - 12	7.12	6.5-8.5
3.	Total Suspended Solids as TSS	mg/l	APHA, 23rd Ed. : 2017, 2540-D	5-5000	34.4	-
4.	Total Dissolved Solids as TDS	mg/l	APHA, 23rd Ed. : 2017, 2540-C	5 - 5000	232.0	1500
5.	Biochemical Oxygen Demand as BOD	mg/l	APHA, 23rd Ed. : 2017, 5210 A+B	1-1000	2.4	3.0
6.	Chemical Oxygen Demand as COD	mg/l	APHA, 23rd Ed. : 2017, 5210 A+B	1-1000	18.0	-
7.	Oil & Grease as O&G	mg/l	APHA, 23rd Ed. : 2017, 5520 A+D	5-600	BDL	0.1
8.	Dissolved Oxygen as DO	mg/l	APHA, 23rd Ed. : 2017, 4500 A+C	1-15	5.4	4
9.	Chloride as Cl	mg/l	APHA, 23rd Ed. : 2017, 4500 Cl A+B	5 - 1000	26.0	600
10.	Sulphate as SO4	mg/l	APHA, 23rd Ed. : 2017, 4500-SO42- E	1 - 250	22.3	400
11.	Nitrate Nitrogen as NO3	mg/l	APHA, 23rd Ed. : 2017, 4500-NO3 2- E	5 - 100	BDL	50
12.	Fluoride as F	mg/l	APHA, 23rd Ed. : 2017, 4500-C	0.05 -10	0.25	1.5
13.	Iron as Fe	mg/l	APHA, 23rd Ed. : 2017, 3500 Fe B	0.02-50	0.12	50.0
14.	Arsenic as As	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.01-2	BDL	0.2
15.	Hexavalent Chromium as Cr+6	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.05-20	BDL	0.05
16.	Copper as Cu	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.05-5	BDL	1.5
17.	Zinc as Zn	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.02-50	0.09	15
18.	Phenolic Compound as C6H5OH	mg/l	APHA, 23rd Ed. : 2017, 5530 A+C	0.05 - 10	BDL	0.005
19.	Anionic Detergent as MBAS	mg/l	APHA, 23rd Ed. : 2017, 5540 A+C	0.01-5	BDL	1.0
20.	Lead as Pb	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.01-1	BDL	0.1
21.	Cadmium as Cd	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.002-2	BDL	0.01
22.	Total coliform	MPN/100 ml	APHA, 23rd Ed. : 2017, 9221 A+B	1.8	140	5000

Statement of Conformity: The above tested parameters confirm as per IS-2296 Class-C limits for above tested parameters and the results are related to the sample tested.

Note: - BDL- Below Detection Limit

Verified By

[Signature]
Technical Manager

Authorized By

[Signature]
Quality Manager
[Stamp]



TEST REPORT

FORMAT NO. ECO/QS/FORMAT/07

NAME & ADDRESS OF CUSTOMER:	Jajang Iron Ore Mines M/s JSW Steel Ltd.	ULR No.	TC127512400000505F
		Test Report No.	ECO/LAB/SW/0102/0505/09/2024
		Issue Date of Test Report	08.10.2024
Type of Sample	Surface Water		
Sample Registration No.	0102	Name of Location	Mines Runoff Gate No. -2 Area
Sampling Method	APHA	Sample Collected By	EMPL Representative
Date of Sample Collection	18.09.2024	Time of Sample Collection	-
Date of Sample Received	18.09.2024	Time of Sample Received	05:40 PM
Start Date of Analysis	18.09.2024	End Date of Analysis	08.10.2024
Laboratory Environmental Condition	Temperature: 27 ± 2 °C	Sample Quantity	As Per Requirement
	Humidity: 55 %	Sample ID Code	ECO/LAB/0505/09/2024

S\ No.	TESTS	Unit	PROTOCOL	DETECTION RANGE	RESULT	INDIAN STANDARDS as IS-2296(C)
1.	Colour	Hazen	APHA, 23rd Ed. : 2017, 2120 B	5-100	10.0	300
2.	pH	-	APHA, 23rd Ed. : 2017, 4500H+A+B	2 - 12	6.86	6.5-8.5
3.	Total Suspended Solids as TSS	mg/l	APHA, 23rd Ed. : 2017, 2540-D	5-5000	38.6	-
4.	Total Dissolved Solids as TDS	mg/l	APHA, 23rd Ed. : 2017, 2540-C	5 - 5000	256.0	1500
5.	Biochemical Oxygen Demand as BOD	mg/l	APHA, 23rd Ed. : 2017, 5210 A+B	1-1000	3.0	3.0
6.	Chemical Oxygen Demand as COD	mg/l	APHA, 23rd Ed. : 2017, 5210 A+B	1-1000	21.0	-
7.	Oil & Grease as O&G	mg/l	APHA, 23rd Ed. : 2017, 5520 A+D	5-600	BDL	0.1
8.	Dissolved Oxygen as DO	mg/l	APHA, 23rd Ed. : 2017, 4500 A+C	1-15	5.7	4
9.	Chloride as Cl	mg/l	APHA, 23rd Ed. : 2017, 4500 Cl A+B	5 - 1000	30.0	600
10.	Sulphate as SO ₄	mg/l	APHA, 23rd Ed. : 2017, 4500-SO ₄ -E	1 - 250	28.5	400
11.	Nitrate Nitrogen as NO ₃	mg/l	APHA, 23rd Ed. : 2017, 4500-NO ₃ 2- E	5 - 100	BDL	50
12.	Fluoride as F	mg/l	APHA, 23rd Ed. : 2017, 4500-C	0.05 -10	0.31	1.5
13.	Iron as Fe	mg/l	APHA, 23rd Ed. : 2017, 3500 Fe B	0.02-50	0.12	50.0
14.	Arsenic as As	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.01-2	BDL	0.2
15.	Hexavalent Chromium as Cr+6	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.05-20	BDL	0.05
16.	Copper as Cu	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.05-5	BDL	1.5
17.	Zinc as Zn	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.02-50	0.02	15
18.	Phenolic Compound as C ₆ H ₅ OH	mg/l	APHA, 23rd Ed. : 2017, 5530 A+C	0.05 - 10	BDL	0.005
19.	Anionic Detergent as MBAS	mg/l	APHA, 23rd Ed. : 2017, 5540 A+C	0.01-5	BDL	1.0
20.	Lead as Pb	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.01-1	BDL	0.1
21.	Cadmium as Cd	mg/l	APHA, 23rd Ed. : 2017, 3111 A+B	0.002-2	BDL	0.01
22.	Total coliform	MPN/100 ml	APHA, 23rd Ed. : 2017, 9221 A+B	1.8	190.0	5000

Statement of Conformity: The above tested parameters confirm as per IS-2296 Class-C limits for above tested parameters and the results are related to the sample tested.

Note: - BDL- Below Detection Limit

Verified By

Technical Manager

Authorized By

Quality Manager