स्टील अथॉरिटी ऑफ इण्डिया लिमिटेड
STEEL AUTHORITY OF INDIA LIMITED
राउरकेला इस्पात कारखाना
ROURKELA STEEL PLANT
बरसुआ लौह खादान - टेलडिही लौह खादान
BARSUA IRON MINES - TALDHI IRON MINES
P.O. TENSA - 770042
E-mail : gmofficebim@gmail.com

60TH YEAR OF PRODUCTION
सेल SAIL
SINCE 1959

Ref. No. BIM/E&L/2026-27/079 Date: 05.09.2026

To,
The Member Secretary,
State Pollution Control Board, Odisha,
A/118, Nilakantha Nagar, Unit-VIII,
Bhubaneswar – 751012

Sub: Environmental Statement for 2025-26 in respect of Barsua-Taldih-Kalta Iron Mines.

Sir,

Please find enclosed herewith the Environmental Statement in Form - V for the year ending on 31st March 2026 in respect of Barsua-Taldih-Kalta Iron Mines of M/s Steel Authority of India Limited for your kind perusal.

Thanking You.

Yours faithfully,
For SAIL/Barsua-Taldih-Kalta Iron Mines

5/9/26

(Himanshu Mishra)
Chief General Manager, BIM, KIM & TIM

Encl: As Above

Copy to:

1. The Additional Director(s),
   MOEF, Govt. of India,
   Eastern Regional Office,
   A/9, Chandrasekharpur,
   Bhubaneswar, Odisha – 751023

2. The Regional Officer,
   State Pollution Control Board,
   Near Panposh Hockey Chowk, Rourkela -769004

ENVIRONMENTAL STATEMENT
YEAR: 2025-26

STEEL AUTHORITY OF INDIA LIMITED
BARSUA-TALDIH-KALTA IRON MINES
DISTRICT - SUNDARGARH
ODISHA - 770042

FORM – V

Environmental Statement for the financial year ending 31st March 2026

PART – A

(i)	**Name and address of the owner/occupier of the industry operation or process.**	:	Barsua-Taldih-Kalta Iron Mines P.O- Tensa, Dist.: Sundargarh Pin- 770042, Odisha
	Agent	:	Shri Himanshu Mishra, Chief General Manager (Mines) Barsua-Taldih-Kalta Iron Mines
	Nominated Owner	:	Shri Manish Raj Gupta Director (Mining), CO, SAIL.
(ii)	**Industry category Primary - (STC code) Secondary - (SIC Code)**	:	Open Cast Iron Mine
(iii)	**Production capacity**	:	12.0 MTPA
(iv)	**Year of establishment**	:	1960
(v)	**Date of the last environmental statement submitted**	:	13.09.2025

PART – B

Water and Raw Material Consumption

(1) **Water consumption**	**m^3/day**
Process	1076.41
Cooling	606.32 (dust suppression)
Domestic	3560.00

Name of Products	*Process water consumption per unit of product output*	
	During the previous financial year (2024-25) in m^3/MT	***During the Current financial (2025-26) in m^3/MT***
(1) Washed Iron Ore	0.89	0.88

(2) Raw Material Consumption

Name of raw materials	*Name of products*	*Raw material consumption per unit of product output*	
		During the previous financial year (2024-25)	*During the Current financial (2025-26)*
(1) Diesel (Ltrs/tonne)	Iron Ore	0.6635	0.5333
(2) Lubricant			
a) Lubricant oil (Ltrs/tonne)		0.0082	0.0094
b) Grease (Kg/tonne)		0.0019	0.0020
(3) Explosive			
a) Ammonium Nitrate in cartridged form (kg/tonne)		0.0437	0.0163
b) Slurry Explosive (kg/tonne)		0.0376	0.0814
c) Detonators (Nos/tonne)		0.0080	0.0076
d) Detonating Fuse (Mtrs/tonne)		0.0094	0.0043
(4) Power Consumed (Kwh/tonne)		2.5062	2.2730

The Iron Ore production during 2025-26 is **8.277** million tonnes and during 2024-25 was 7.746 million tonnes.

PART - C
Pollution discharged to environment / unit of output

[Parameter as specified in the consent issued]

Pollutants	*Quality of pollutants Discharged (mass/day)*	*Concentrations of pollutants in discharges (mass/volume)*	*Percentage of variation from prescribed standards with reason.*
a) Water	The Environmental monitoring report is attached in **Annexure - I**		
b) Air			

PART –D
Hazardous Wastes

[As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016]

Hazardous Wastes	**Total Quantity(kg)**	
	During the previous Financial Year (2024-25)	**During the current Financial Year (2025-26)**
a) From Process • Used / Spent Oil	18.12 KL	5.29 KL

• Waste / Residues containing oil • Contaminated cotton rags or other cleaning materials. • Discarded Containers / Barrels / Liners contaminated with Hazardous Wastes / Chemicals	2.885 T 0.837 T 3.889 T	2.510 T 0.103 T 17.114 T
b) From Pollution Control facility • Waste oil from oil & grease separation pit • Sludge from oil & grease separation pit	Nil (Included in process above)	

PART – E
Solid Wastes

Wastes	Total Quantity (Tonnes)	
	During the previous Financial Year (2024-25)	During the current Financial Year (2025-26)
(a) From Process (1) Overburden / rejects (2) Tailings	 40,73,817.22 Ton 2,87,991.00 Ton	 31,08,342.96 Ton 2,89,211.00 Ton
(b) From Pollution Control facilities	NIL	NIL
(c) (1) Quantity recycled or re-utilized within the unit (2) Sold (3) Disposed	10,21,480.00 Ton 4,50,172.39 Ton 33,40,328.25 Ton	6,53,140.00 Ton 7,91,652.14 Ton 28,05,413.96 Ton

PART –F

Please Specify the chracterisation (in terms of compositions and quantum) of Hazardous as well as Solid Wastes and indicate disposal practice adopted for both these category of wastes.

Hazardous Waste Handling and Disposal:

1	Used / Spent Oil	Storage in containers over impervious floor under well ventilated covered shed followed by sale to authorized recycler through auction.
2	Waste / Residues containing oil	Storage in an impervious pit under covered shed followed by final disposal in Authorised Hazardous Waste incinerator / CHWTSDF, Jajpur.
3	Contaminated cotton rags or other cleaning materials.	Storage in an impervious pit / containers under covered shed followed by final disposal in Authorised Hazardous Waste incinerator / CHWTSDF, Jajpur.
4	Discarded Containers /	Storage in an impervious floor under well ventilated covered shed

	Barrels / Liners contaminated with Hazardous Wastes / Chemicals	followed by captive re-use / disposal through authorized vendors.

Solid Waste Handling and Disposal:

These contain high proportions of overburden/mineral rejects in the form of gravel/ boulder and tailings. In the overburden, the Fe content is less than 45% however in mineral rejects the same is between 45-57%. The bulk chemical composition tailing is around 57.67% Fe. 6.29% Al2O3, 3.52% SiO2 and 6.93% LOI.

Disposal practice adopted for solid wastes:

i) Tailing generated out of washing and jigging operations are allowed to settle in tailing pond. The tailings thus generated are being sold through auction as per the directive of Ministry of Mines, Govt. of India vide order No. F.No. 16/30/2019-M.VI dated 16th September, 2019.

ii) The Overburden, Mineral reject are being stacked at earmarked sites as per the approved mining plan within the existing broken areas. The mineral rejects are being re-utilized by blending with high grade minerals.

PART – G

In respect of the pollution abatement measures taken up on conservation of natural resources and on the cost of production.

1. Various mineral conservation techniques are adopted by mine including use of low-grade ore by beneficiation, blending of mineral rejects with high grade ore as per steel plant quality requirements. Utilization of mineral rejects / tailing for sale in open market or for pellet conversion.
2. For conservation of natural resources, high efficiency HEMM are being used with schedule maintenance which keeps the vehicular emission under control and also reduce the fuel consumption.
3. A System for Zero Discharge has been provided at Barsua Iron Mine for recovery and recycling of decanted water from the tailing pond which resulted in reduction of pollution load in the nearby water bodies and reduce the fresh water consumption.
4. Dry fog system has been installed at crushing plant and transfer points which improves the working environment in the plant.
5. Check dam, retaining wall, toe wall, garland drain and settling pit has been constructed for control of surface run-off from the mines which also result in augmentation of ground water.
6. Mechanized Road Sweeping Machine has been provided for reduction in Dust Re-suspension in the mineral carrying roads.
7. Mist canons provided in the various location to suppress the dust generation during the mining operation.
8. Plantation of 2,000 saplings in and around the mines to improve the forest cover.

PART – H

Additional measures/ investment proposal for environment protection including abatement of pollution, prevention of pollution.

The following additional investment proposals for environmental protection, abatement of pollution, prevention of pollution are under consideration for the mine:

1. Construction of Check dam, garland drain, toe walls/ retention wall and settling pit at appropriate places around the mines.
2. De-silting of existing check dams, settling pits.
3. Construction of rain water harvesting system for recharge of ground water.
4. Procurement of Online Noise Monitoring Station.
5. Procurement of Online Continuous Effluent Monitoring System (OCEMS).
6. Engagement of Protection watchers for protection of forest area in and around the Mining lease.
7. Avenue Plantation along the Road Side.
8. Procurement of Truck mounted mist cannon.

PART – I

Any other particulars for improving the quality of environment.

1. Celebration of World Environment Day, Environment week, Environment month, water conservation month, etc to create awareness among employees and villagers.
2. Display of Boards at various locations carrying environmental slogans and environmental parameters.
3. Celebration for Mass awareness by slogans, working models & Cultural Program by employees & school children.

Date: 05.09.2026

Chief General Manager (Mines)
Barsua-Taldih-Kalta Iron Mines
HIMANSHU MISHRA
Chief General Manager
BIM-TIM-KIM, SAIL-RSP

BARSUA-TALDIH-KALTA IRON MINES

DETAIL ANALYSIS OF AIR QUALITY MONITORING

Location	APRIL '2025					'MAY 2025					'JUNE 2025					'JULY 2025					'AUGUST 2025					'SEPTEMBER 2025				
	RSPM (PM_{10})	$PM_{2.5}$	SO_2	NO_x	CO	RSPM (PM_{10})	$PM_{2.5}$	SO_2	NO_x	CO	RSPM (PM_{10})	$PM_{2.5}$	SO_2	NO_x	CO	RSPM (PM_{10})	$PM_{2.5}$	SO_2	NO_x	CO	RSPM (PM_{10})	$PM_{2.5}$	SO_2	NO_x	CO	RSPM (PM_{10})	$PM_{2.5}$	SO_2	NO_x	CO
Unit	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3
Ambient Air Quality in Residential, rural & other areas.																														
rm as per NAAQS	100	60	80	80	4	100	60	80	80	4	100	60	80	80	4	100	60	80	80	4	100	60	80	80	4	100	60	80	80	4
A 1	39.85	25.43	12.03	18.94	0.57	47.47	27.56	10.00	16.21	0.51	39.64	21.66	8.13	15.29	0.47	25.27	14.39	5.23	9.16	0.33	30.05	17.53	5.89	8.78	0.35	31.58	18.22	6.10	10.23	0.2
A 2	92.45	51.56	19.64	31.08	1.06	80.17	45.07	15.91	26.32	0.98	64.07	36.17	12.02	21.39	0.85	36.83	19.94	6.92	12.84	0.46	46.44	26.08	8.99	15.59	0.64	58.28	32.33	10.27	16.01	0.5
A 3	53.76	30.86	11.98	19.48	0.62	45.53	25.59	10.27	16.82	0.59	41.16	22.48	8.75	15.51	0.50	21.30	12.19	5.09	8.68	0.30	35.01	19.64	7.36	12.41	0.38	29.63	16.81	6.81	10.76	0.4
A 4	75.57	42.20	13.82	21.39	0.80	65.16	36.03	12.78	19.96	0.70	52.84	30.05	9.66	18.05	0.62	29.17	16.38	5.71	9.36	0.37	36.02	20.80	7.67	12.96	0.44	38.39	22.88	8.35	13.16	0.4
A5	91.61	53.27	18.14	29.80	1.16	79.47	44.06	16.33	25.54	0.99	66.15	37.25	12.36	22.99	0.84	38.79	21.76	6.87	12.93	0.42	52.59	30.49	10.51	16.97	0.58	51.97	28.98	10.02	16.47	0.5
A6	77.07	43.20	14.73	25.16	0.84	70.28	40.62	13.41	21.61	0.77	52.55	29.54	9.33	17.01	0.66	28.24	15.78	6.14	10.34	0.36	44.93	24.97	8.72	14.26	0.49	42.96	25.34	8.25	13.61	0.3
A7	52.33	31.69	10.58	18.31	0.71	53.17	32.42	11.27	18.79	0.71	50.59	30.20	9.93	17.30	0.62	26.47	14.98	5.92	10.28	0.34	35.79	19.98	8.11	12.81	0.48	36.45	20.96	7.10	12.00	0

nit in µg/m^3

e : Ambient Air Quality Monitoring was conducted as per MoEF Notification No. GSR 826(E), dtd.16.11.2009.

Results of Fugitive Emission / Work Zone Quality.

	APRIL 2025		'MAY 2025		'JUNE 2025		'JULY 2025		'AUGUST 2025		'SEPTEMBER 2025	
rm as per BM	1200 µg/m3		1200 µg/m3		1200 µg/m3		1200 µg/m3		1200 µg/m3		1200 µg/m3	
tual(PM)	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min	Max	Min.	Max.
F1	576.1	692.6	109	425.7	102.5	541.7	72.6	142.3	90.5	413.2	78.2	384.3
F2	591.8	713.6	174	564.9	106.8	627.5	77.5	138.2	103.7	408.7	82.9	408.2
F3	549	669.1	134	466.1	97.5	617.3	66.2	116.8	92.9	348.2	79.4	318.4
F4	616.2	741.6	174	777.3	121.8	629.7	69.5	123.5	101.3	412.5	91.8	419.6
F5	548.6	790.6	160	682.6	109.4	723.6	65.1	113.4	104.8	406.2	85.4	384.5
F6	548.2	667.2	136	682.4	79.5	619.7	62.5	110.8	74.2	341.5	69.4	376.2
F7	749.2	849.7	241	824.3	97.4	813.5	67.3	134.6	89.3	539.3	81.7	642.3
F8	659.4	768.4	159	763.8	80.4	703.4	64.7	121.4	80.4	426.5	74.6	427.6
F9	582.1	732.6	146	673.2	90.2	513.2	67.8	134.5	84.2	421.3	82.3	384.2
F10	538.7	689.6	135	671.8	82.3	608.3	64.2	108.7	76.5	367.1	28.4	408.3
F11	723.4	842.8	209	832.3	104.5	813.5	80.6	213.6	92.7	546.9	86.3	491.7
F12	619.2	743.8	164	728.3	94.8	682.4	70.3	142.5	89.7	471.4	81.5	368.3

nit in µg/m^3

e : Fugitive emission standards as per MoEF Notification No. GSR 809(E), dtd.4.10.2010 on iron ore mining and processing. Particulate matter (PM)-1200
m^3 at a distance of 25±2m. In the pre dominant downward direction from the source of generation.

:

ations :

. Tensa Hospital, Tensa	A 5 : Roxy Railway Siding	F1 : Ore Handling plant(BIM)	F5 : Stock pile & Loading(B V, BIM)	F9: Drilling Area (KIM)
Barsua Railway Siding	A 6 : Near MI -139/Kalta C Block	F2: Excavation & loading (BIM)	F6 : Haul Road (TIM)	F10: Excavation (KIM)
Tantara Village		F3 : Haul Road(BIM)	F7 : Mobile Screening Area (TIM)	F11: Haul Road Area (KIM)
. Mine Site Office (KIM)		F4 : Dump Area(BIM)	F8 : Excavation Area(TIM)	F12: Mobile Crushing & Screening Area (KIM)

SAIL

BARSUA TALDIH-KALTA IRON MINES

DETAIL ANALYSIS OF AIR QUALITY MONITORING

Location	OCTOBER 2025					'NOVEMBER 2025					'DECEMBER 2025				
	RSPM (PM_{10})	$PM_{2.5}$	SO_2	NO_x	CO	RSPM (PM_{10})	$PM_{2.5}$	SO_2	NO_x	CO	RSPM (PM_{10})	$PM_{2.5}$	SO_2	NO_x	CO
Unit	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3
A) Ambient Air Quality in Residential, rural & other areas.															
Norm as per NAAQS	100	60	80	80	4	100	60	80	80	4	100	60	80	80	4
A 1	43.13	23.76	6.96	11.54	0.46	45.41	26.54	8.53	14.11	0.63	41.38	24.52	9.13	15.16	0.55
A 2	90.79	51.39	13.27	21.50	1.26	91.16	50.83	15.94	27.41	1.22	90.29	51.29	16.70	27.24	1.27
A 3	39.66	23.26	8.61	15.29	0.51	49.78	28.98	9.58	15.85	0.74	52.40	30.40	10.42	15.86	0.71
A 4	72.89	41.83	11.48	18.50	0.80	70.00	40.43	11.16	16.81	0.80	77.38	43.49	13.22	20.34	0.91
A5	87.38	51.54	14.54	23.29	1.16	89.99	50.83	14.85	23.90	1.20	92.38	52.13	17.76	29.14	1.29
A6	79.57	45.28	12.36	18.78	0.83	77.14	43.79	13.17	20.22	0.95	71.93	40.43	13.33	20.78	0.85
A7	57.45	32.33	11.81	18.26	0.77	70.20	39.69	11.90	17.40	0.77	73.21	41.89	11.61	16.09	0.75

*** unit in µg/m³**

Note : Ambient Air Quality Monitoring was conducted as per MoEF Notification No. GSR 826(E), dtd.16.11.2009.

B) Results of Fusitive Emission / Work Zone Quality.

	OCTOBER 2025		'NOVEMBER 2025		'DECEMBER 2025	
Norm as per IBM	1200 µg/m3		1200 µg/m3		1200 µg/m3	
Actual(PM)	Min.	Max.	Min.	Max.	Min.	Max.
F 1	482.3	613.5	524.8	713.4	567.4	745.9
F 2	467.8	623.8	482.7	773.5	648.7	792.3
F 3	462.3	611.5	462.5	643.2	576.2	742.6
F 4	473.2	687.5	582.7	735.8	608.7	764.5
F 5	418.6	671.4	461.7	719.2	564.0	734.5
F 6	467.3	624.3	482.3	670.4	592.1	725.3
F 7	618.3	782.6	667.8	834.7	682.7	834.8
F 8	467.5	721.7	476.3	687.3	584.3	749.2
F 9	439.7	678.2	467.2	631.4	613.1	746.3
F 10	467.8	637.3	546.1	673.5	524.3	736.5
F 11	551.5	763.1	616.6	809.2	731.5	843.4
F 12	425.8	671.5	463.5	682.4	546.3	738.7

*** unit in µg/m³**

Note : Fusitive emission standards as per MoEF Notification No. GSR 809(E), dtd.4.10.2010 on iron ore mining and processing. Particulate matter (PM)-1200 µg/m³ at a distance of 25±2m. In the pre dominant downward direction from the source of generation .

NB :

Locations :

A 1 : Tensa Hospital, Tensa
A 2 : Barsua Railway Siding
A 3 : Tantara Village
A 5 : Roxy Railway Siding
A 6 : Near ML-139/Kalta C Block
F1 : Ore Handling plant(BIM)
F2: Excavation & loading (BIM)
F3 : Haul Road(BIM)
F5 : Stock pile & Loading(B-V, BIM)
F6 : Haul Road (TIM)
F7 : Mobile Screening Area (TIM)
F9: Drilling Area (KIM)
F10: Excavation (KIM)
F11: Haul Road Area (KIM)

SAIL

BARSUA-TALDIH-KALTA IRON MINE

WATER QUALITY OF STREAM SAMPLES/SURFACE WATER

Sl.No.	Parameters	APRIL 2025						MAY 2025						JUNE 2025					
		SW 1	SW 2	SW 3	SW 4	SW 5	SW 6	SW 1	SW 2	SW 3	SW 4	SW 5	SW 6	SW 1	SW 2	SW 3	SW 4	SW 5	SW 6
1	pH	7.29	7.46	6.74	7.08	7.47	7.47	7.12	7.14	6.79	6.98	7.24	7.48	7.15	7.4	6.95	7.15	7.4	7.46
2	Temperature	22°c	23°c	22°c	22°c	22°c	22°c	29°c	30°c	34°c	22°c	32°c	32°c	27°c	27°c	28°c	27°c	28°c	27°c
3	Turbidity(NTU)	1.8	2.2	1.5	1.8	1.8	2.6	1.2	1.4	<1.0	<1.0	2.2	2.6	9	8	1.2	1.2	11	<1.0
4	Residual Free Chlorine mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NT	NT	NT	NT	NT	NT	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
5	Alkalinity as CaCo3 mg/l	20	28	32	6	48	44	32	28	40	32	40	52	40	32	32	24	40	56
6	Chloride as Cl mg/l	4	4	4	4	4	4	4	4	4	4	4	4	8	4	4	4	4	4
7	Total Hardness as CaCo3 mg/l	24	24	32	36	48	44	28	32	40	36	44	40	44	36	44	36	48	48
8	Calcium as Ca mg/l	8	6.4	8	11.2	14.4	12.8	6	8	6.4	9.6	13	14	11	13	13	13	11	14
9	Magnesium as Mg mg/l	0.972	0.972	2.9	1.9	2	3	1.9	2.9	5.8	2.9	2.9	0.972	3.8	0.972	0.972	2.916	4.86	2.916
10	Sulphate as So4 mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2	3	8.4	<1.0	6	4	8	2	1
11	Nitrate as No3 mg/l	0.816	0.579	0.986	0.647	0.723	0.952	2.15	1.62	4.6	5.73	0.346	0.851	1.091	1.644	0.856	1.984	1.014	2.112
12	Fluoride as F mg/l	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	132	0.08	0.042	0.108	<0.02	<0.02	0.216	0.32	0.411	0.269	0.324	0.336
13	Total dissolve Solids mg/l	29	29	42	47	53	60	25	29	40	46	50	54	32	30	47	50	48	56
14	Total Suspended Solids mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2	4	2	3	3	4	2	1	<1.0	<1.0	3	<1.0
15	D.O	3.9	3.9	3.8	3.9	4	4	4	4.2	4	4	4.2	4	4.2	4	4.1	4	4	4.2
16	BOD, 5days at 20 C	<3	2	2	<3	<2.0	<3.0	<3	2	2	<3	2	2	<3	<3	<3	<3	<3	<3
17	COD	10	13	25	38	10	19	16.8	7.8	4.6	3.4	3	4	12	8	60	24	52	32
18	Oil and Grease mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.65	0.89	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
19	Iron as Fe mg/l	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12	0.31	0.1	<0.05	<0.05	<0.05
20	Copper as Cu mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
21	Zinc as Zn mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
22	Aluminium as Al mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
23	Boron as B mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
24	Manganese as Mn mg/l	<0.05	0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05
25	Lead as Pb mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
26	Cadmium as Cd mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
27	Arsenic as As mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
28	Mercury as Hg mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
29	Nickel as Ni mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
30	Chromium as Cr +6mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	N.T	N.T	N.T	N.T	N.T	N.T
31	Phenolic compound mg/l	<0.005	<0.005	<0.005	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005
32	Cyanide as CN mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
33	Sulphide as S mg/l	N.T	N.T	<1.0	<1.0	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T
34	Free Ammonia as N mg/l	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T
35	Kjeldahl Nitrogen as N mg/l	6	8	8	6	22	29	7.2	6.7	10.6	12.3	19	12	2.24	4.48	2.24	4.48	2.24	1.12
36	Ammonia as N mg/l	<0.02	<0.02	<0.02	<0.02	0.22	0.89	<0.02	<0.02	<0.02	<0.02	0.25	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
37	Total Coliform, MPN/100 ml	221	172	240	221	278	345	270	220	260	210	230	220	200	240	240	210	210	170

NB :

SW 1: Kuradih Nala US : BIM

SW 2: Kuradih Nala DS : BIM

SW 3: Samaj Nallah US : Near Tantra

SW 4: Samaj Nallah DS : Near Phuljhar

SW 5: Samaj Nallah US : KIM

SW 6 : Samaj Nallah DS: KIM

BARSUA-TALDIH-KALTA IRON MINE

WATER QUALITY OF STREAM SAMPLES/SURFACE WATER

Sl.No.	Parameters	JULY 2025						AUGUST 2025						SEPTEMBER 2025					
		SW 1	SW 2	SW 3	SW 4	SW 5	SW 6	SW 1	SW 2	SW 3	SW 4	SW 5	SW 6	SW 1	SW 2	SW 3	SW 4	SW 5	SW 6
1	pH	7	7	7	7	7	7.46	6.9	7	6.6	6.8	6.4	6.7	7	7	6.9	7.2	7	7
2	Temperature	25°c	25°c	26°c	25°c	25°c	25°c	25°c	25°c	25°c	25°c	25°c	25°c	25°c	25°c	24°c	24°c	24°c	24°c
3	Turbidity(NTU)	24.4	40	8	17.5	7.3	80.3	1.2	4.5	5.6	20	1.2	1.1	3	1	1.1	<1.0	4	11
4	Residual Free Chlorine mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	Alkalinity as CaCo3 mg/l	24	24	24	20	12	12	20	20	16	12	48	32	40	44	16	20	28	32
6	Chloride as Cl mg/l	4	4	4	4	4	4	12	4	4	8	4	8	12	16	4	8	8	12
7	Total Hardness as CaCo3 mg/l	28	28	24	24	44	32	48	40	28	48	50	60	44	36	40	40	40	72
8	Calcium as Ca mg/l	9.6	8	8	6.4	11.2	12.8	10	18	8	11	14	10	22.4	20.8	11.2	22.4	22.4	14.4
9	Magnesium as Mg mg/l	0.97	1.97	0.97	1.94	3.9	0.243	6	<0.243	1.9	4.9	5.8	8.7	2.243	<0.243	2.9	<0.0243	0.0243	8.75
10	Sulphate as So4 mg/l	4	4	4	3	3	2	3.6	4.4	4	4.7	5.3	6.7	<1.0	<1.0	<1.0	6.9	9.4	8
11	Nitrate as No3 mg/l	2.7	2.5	2.6	1.9	2	2.2	1.6	1.8	<1.0	<1.0	2	3.2	<1.0	<1.0	1.35	1.14	2.8	<1.0
12	Fluoride as F mg/l	0.18	0.2	0.25	0.19	0.26	0.37	0.87	0.72	1.4	1.4	1.2	1.3	0.23	0.36	0.15	0.22	0.38	0.6
13	Total dissolve Solids mg/l	22	27	25	19	84	41	23	26	22	32	44	48	28.4	28.8	25.6	30.2	33	35.6
14	Total Suspended Solids mg/l	8	10	2	6	3	26	<1.0	<1.0	2	1	4	3	3	1	2	10	4	10
15	D.O.	3.8	3.8	3.7	3.6	3.8	3.7	4.8	4.9	4.7	4.8	4.6	4.9	3.9	4	4	3.9	3.9	4
16	BOD, 3days at 20 C	2	<3	<2	<3	<3	<3	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
17	COD	6.4	45	12	20	54	224	205	19845	205	184	192	206	12.8	6.4	6.4	19.2	32	19.2
18	Oil and Grease mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
19	Iron as Fe mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.211	0.162	0.209	0.221	0.196	0.09	0.01	0.08	0.01	0.08	0.01	0.08
20	Copper as Cu mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.17
21	Zinc as Zn mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
22	Aluminium as Al mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
23	Boron as B mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
24	Manganese as Mn mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
25	Lead as Pb mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
26	Cadmium as Cd mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
27	Arsenic as As mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
28	Mercury as Hg mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
29	Nickel as Ni mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
30	Chromium as Cr +6mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
31	Phenolic compound mg/l	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
32	Cyanide as CN mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
33	Sulphide as S mg/l	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T
34	Free Ammonia as N mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T
35	Kjeldahl Nitrogen as N mg/l	5.2	4.48	3	8.96	6	12.39	6	8	2.24	6	2.04	4	4.5	6.72	5.6	3.3	3.9	4.5
36	Ammonia as N mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
37	Total Coliform, MPN/100 ml	172	212	221	253	177	212	340	300	330	270	330	400	280	300	220	240	280	320

NB :

SW 1: Kuradih Nala US : BIM

SW 2: Kuradih Nala DS : BIM

SW 3: Samaj Nallah US : Near Tantra

SW 4: Samaj Nallah DS : Near Phuljhar

SW 5: Samaj Nallah US : KIM

SW 6 : Samaj Nallah DS: KIM

BARSUA-TALDIH-KALTA IRON MINE

WATER QUALITY OF STREAM SAMPLES/SURFACE WATER

Sl.No.	Parameters	OCTOBER 2025						NOVEMBER 2025						DECEMBER 2025					
		SW 1	SW 2	SW 3	SW 4	SW 5	SW 6	SW 1	SW 2	SW 3	SW 4	SW 5	SW 6	SW 1	SW 2	SW 3	SW 4	SW 5	SW 6
1	pH	6.9	7	7.2	6.9	6.8	6.5	7	7	7	7	7	7	6.6	6.8	6.5	6.8	7	7
2	Temperature	25°c	25°c	25°c	25°c	25°c	25°c	23°c	23°c	21°c	22°c	22°c	22°c	25°c	25°c	25°c	25°c	25°c	25°c
3	Turbidity(NTU)	3.1	1.4	2.2	<1.0	4.7	4.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	7.2	23	1.6	1.4	1.2	3.4
4	Residual Free Chlorine mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	N.T	N.T	N.T	N.T	N.T	N.T
5	Alkalinity as CaCo3 mg/l	40	48	20	24	36	32	28	24	36	28	40	44	24	26	7.2	26	28	34
6	Chloride as Cl mg/l	4	12	8	4	8	8	4	4	4	4	4	4	4	8	4	4	4	6
7	Total Hardness as CaCo3 mg/l	28	32	20	36	40	44	44	28	40	32	36	28	24	26	20	24	40	44
8	Calcium as Ca mg/l	9.6	11.2	8	11.2	9.6	14.4	6.4	9.6	8.4	16	18	10	8	8.8	6.4	8	10.4	11.2
9	Magnesium as Mg mg/l	0.972	0.487	<0.243	1.94	3.88	1.94	6.8	0.972	3.84	0.243	<0.243	0.972	0.48	0.48	0.97	0.97	3.4	3.8
10	Sulphate as So4 mg/l	<1.0	<1.0	<1.0	<1.0	1.5	1.4	5	4	3	4	7	6.8	6.3	2.2	2.9	1.6	5	6
11	Nitrate as No3 mg/l	<1.0	1.3	1.28	1.2	0.9	1.6	2.8	4.2	0.96	1.6	2.4	2.8	4.8	2.3	6.3	2.6	3.6	1.3
12	Fluoride as F mg/l	0.27	0.44	0.32	0.33	0.45	0.42	<0.1	<0.1	0.787	0.2	<1.0	<1.0	<0.1	<0.1	0.32	<0.2	0.29	0.14
13	Total dissolve Solids mg/l	17	42	24	27	35	36	16	19	30	30	32	37	4	52	30	30	32	37
14	Total Suspended Solids mg/l	<1.0	2	<1.0	<1.0	2	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	4	52	2	4	<1.0	<1.0
15	D.O.	<1.0	4.2	<1.0	<1.0	4.2	4.2	4	3.8	4	3.9	3.9	3.7	4	3.9	3	3.9	4	3.8
16	BOD, 5days at 20 C	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	22	30	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
17	COD	40	33	20	13	33	40	108	212	202	206	211	207	143	148	62	71	199	186
18	Oil and Grease mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
19	Iron as Fe mg/l	0.15	0.12	0.13	0.2	0.2	0.31	0.08	0.07	0.08	0	0.07	0.19	0.46	0.32	0.06	0.05	0.305	0.289
20	Copper as Cu mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	0.17	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
21	Zinc as Zn mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
22	Aluminium as Al mg/l	0.12	0.2	0.12	0.26	0.22	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
23	Boron as B mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<0.05	<0.05	0.11	0.1
24	Manganese as Mn mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.08	0.08	0.08	<0.05	<0.05
25	Lead as Pb mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.01	<0.01
26	Cadmium as Cd mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
27	Arsenic as As mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
28	Mercury as Hg mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
29	Nickel as Ni mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02
30	Chromium as Cr +6mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01
31	Phenolic compound mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
32	Cyanide as CN mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
33	Sulphide as S mg/l	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T
34	Free Ammonia as N mg/l	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T	N.T
35	Kjeldahl Nitrogen as N mg/l	6..0	3.4	6	3	3	5	8	6	9	5.6	11	9	5.6	6.7	5.6	6.7	7.9	8.9
36	Ammonia as N mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02
37	Total Coliform, MPN/100 ml	330	270	240	260	240	280	210	260	230	240	270	300	260	330	300	340	260	230

NB :

SW 1: Kuradih Nala US : BIM

SW 2: Kuradih Nala DS : BIM

SW 3: Samaj Nallah US : Near Tantra

SW 4: Samaj Nallah DS : Near Phuljhar

SW 5: Samaj Nallah US : KIM

SW 6 : Samaj Nallah DS: KIM

SAIL

BARSUA-TALDIH-KALTA IRON MINES

WATER QUALITY OF EFFLUENT WATER

Sl.No.	Parameters	APRIL 2025		'MAY 2025		JUNE 2025		JULY 2025		'AUGUST 2025		'SEPTEMBER 2025	
		EW 1	EW 2	EW 1	EW 2	EW 1	EW 2	EW 1	EW 2	EW 1	EW 2	EW 1	EW 2
1	pH	6.77	7.56	6.77	7.56	6.5	7.15	6.3	6.9	6.6	6.8	8	8
2	Temperature	22°c	22°c	22°c	22°c	27°c	26°c	27°c	26°c	25°c	25°c	24°c	24°c
3	Selenium as Se, mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4	Total Residual Chloride mg/l	<1.0	<1.0	<1.0	<1.0	NT	NT	<0.2	<0.2	<1.0	<1.0	<1.0	<1.0
5	Alkalinity as CaCo3 mg/l	12	60	12	60	16	40	20	40	32	96	24	40
6	Chloride as Cl mg/l	4	4	4	4	4	4	4	4	4	4	2	16
7	Total Hardness as CaCo3 mg/l	36	48	36	48	40	36	16	32	52	72	52	80
8	Calcium as Ca mg/l	8	14	8	14	16	14	4.8	8	17.6	17.6	11.2	24
9	Magnesium as Mg mg/l	4	3	4	3	<0.243	<0.243	0.972	2.916	1.94	6.8	5.8	4.9
10	Sulphide as S mg/l	NT	NT	NT	NT	NT	NT	NT	NT	<1.0	<1.0	NT	NT
11	Nitrate as No3 mg/l	1.6	0.34	1.6	0.34	6.149	5.653	4.9	6.6	7.8	10.6	13.9	<1.0
12	Fluoride as F mg/l	0.33	0.5	0.33	0.5	0.409	0.348	0.312	0.265	1.4	1.1	0.63	0.8
13	Total dissolve Solids mg/l	48	65	48	65	24	45	35	40	60	66	16	49
14	Suspended Solids mg/l	2	4	2	4	8	6	15	55	46	40	80	3
15	B.O.D (3 days at 27 °C) mg/l	<0.03	<0.03	<0.03	<0.03	<3.0	<3.0	<3.0	<3.0	24	12	27	6
16	C.O.D	6.2	8	6.2	8	28	8	12.8	25	224	179	134	19.2
17	Oil and Grease mg/l	2.4	3.5	2.4	3.5	0.693	0.528	<0.05	<0.05	2	1	<1.0	<1.0
18	Total Chromium as Cr mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
19	Copper as Cu mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
20	Zinc as Zn mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
21	Boron as B mg/l	<1.0	<1.0	<1.0	<1.0	<0.05	<0.05	<0.05	<0.05	<1.0	<1.0	<1.0	<1.0
22	Odour	Obnoxious	Obnoxious	Obnoxious	Obnoxious	Obnoxious	Obnoxious	Obnoxious	Obnoxious	Obnoxious	Obnoxious	Obnoxious	Obnoxious
23	Colour	15	20	15	20	10	168	25	30	45	54	45	60
24	Lead as Pb mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01
25	Cadmium as Cd mg/l	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
26	Arsenic as As mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.2	<0.2
27	Mercury as Hg mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01
28	Nickel as Ni mg/l	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02
29	Hexavalent Chromium as Cr^{+6} mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NT	NT	<0.05	<0.05
30	Phenolic compound As C_6H_5OH mg/l	<0.05	<0.05	<0.05	<0.05	<0.001	<0.001	1	<1.0	0.85	0.65	<0.005	<0.005
31	Cyanide as CN mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.2	<0.2
32	Dissolved Phosphate as P mg/l	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05
33	Ammonical Nitrogen as N mg/l	0.18	<0.02	0.18	<0.02	0.52	0.6	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05
34	Total Kjeldahl Nitrogen as N mg/l	13.4	7.8	13.4	7.8	8.96	5.6	8.96	7.84	5.6	7.8	8	4.4
35	Free Ammonia as NH_3 mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
36	Iron as Fe mg/l	0.079	0.203	0.079	0.203	0.06	0.83	<0.05	<0.05	<0.05	<0.05	0.07	0.08
37	DO mg/l	3.6	3.7	3.6	3.7	3.8	3.8	3.8	3.6	4.8	4.5	3.9	3.7

NB :

EW 1: Tailing Dam (Before) Discharge

EW 2: Tailing Dam (After) Discharge

सेल SAIL

BARSUA-TALDIH-KALTA IRON MINES

WATER QUALITY OF EFFLUENT WATER

Sl.No.	Parameters	OCTOBER 2025		'NOVEMBER 2025		DECEMBER 2025	
		EW 1	EW 2	EW 1	EW 2	EW 1	EW 2
1	pH	6.9	7	8.2	8.1	7	7.3
2	Temperature	25°C	25°C	24°C	25°C	25°C	25°C
3	Selenium as Se, mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4	Total Residual Chloride mg/l	<1.0	<1.0	NT	NT	NT	NT
5	Alkalinity as CaCo3 mg/l	32	48	42	48	36	42
6	Chloride as Cl mg/l	8	4	4	4	4	6
7	Total Hardness-as CaCo3 mg/l	36	44	40	36	50	60
8	Calcium as Ca mg/l	12.8	14.4	11	11	12.8	16.8
9	Magnesium as Mg mg/l	0.972	1.94	2.9	1.9	4.4	4.8
10	Sulphide as S mg/l	NT	NT	NT	NT	NT	NT
11	Nitrate as No3 mg/l	2.9	1	4.3	3.9	11.2	26.6
12	Fluoride as F mg/l	0.65	0.46	<0.1	<0.1	<0.2	<0.2
13	Total dissolve Solids mg/l	30	44	35	43	40	58
14	Suspended Solids mg/l	5	5.8	4	2	2	5
15	B.O.D (3 days at 27°C) mg/l	23	13	24	20	<3.0	8.2
16	C.O.D	125	66	134	49	66	146
17	Oil and Grease mg/l	2	4	<0.1	0.1	1	1.8
18	Total Chromium as Cr mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
19	Copper as Cu mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
20	Zinc as Zn mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
21	Boron as B mg/l	<0.05	<0.05	<1.0	<1.0	<0.05	<0.05
22	Odour	Obnoxious	Obnoxious	Agr	Agr	Obnoxious	Obnoxious
23	Colour	30	25	15	20	9	1200
24	Lead as Pb mg/l	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01
25	Cadmium as Cd mg/l	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01
26	Arsenic as As mg/l	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01
27	Mercury as Hg mg/l	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01
28	Nickel as Ni mg/l	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05
29	Hexavalent Chromium as Cr^{+6} mg/l	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01
30	Phenolic compound As C_6H_5OH mg/l	<0.05	<0.05	<0.005	<0.005	<1.0	<1.0
31	Cyanide as CN mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
32	Dissolved Phosphate as P mg/l	<0.02	<0.02	35	43	<0.05	<0.05
33	Ammonical Nitrogen as N mg/l	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05
34	Total Kjeldahl Nitrogen as N mg/l	10	3.4	19	12.2	6.7	12.3
35	Free Ammonia as NH_3 mg/l	NT	NT	NT	NT	NT	NT
36	Iron as Fe mg/l	0.15	0.08	0.08	0.06	0.59	0.38
37	DO mg/l	3.8	3.6	3.8	3.6	3.6	3.7

NB :

EW 1: Tailing Dam (Before) Discharge

EW 2: Tailing Dam (After) Discharge

N.T: Not Traable