

#### स्टील अथॉरिटी ऑफ इंडिया लिमिटेड STEEL AUTHORITY OF INDIA LIMITED कोलियरीज डिवीज़न /COLLIERY DIVISION तासरा कोलियरी/TASRA COLLIERY

पोस्ट ऑफिस चासनाला – 828 135, जिला धनबाद – ( झारखण्ड) P.O. CHASNALLA – 828135, DISTT.: DHANBAD (Jharkhand)

Ref. No: -DGM./TASRA/Env.Stat 23-24/ 56.

Date: 16.09.2024

To,
The Member Secretary
Jharkhand State Pollution Control Board
T.A. Division Building, HEC Campus, Dhurwa
Ranchi, Jharkhand-834004

Sub: Submission of Environment Statement of Tasra Coal Mining Project of M/s Steel Authority of India Limited for the FY 2023-24.

Ref.: JSPCB/HO/RNC/CTO-15663289/2023/1161 dated 28.06.2023

Dear Sir,

Please find the enclosed herewith "Environment Statement" of Tasra Coal Mining Project for the financial year 2023-24 in duly filled in the prescribed format Form-V under rule 24 of the Environment (Protection) Rule 1986.

Thanking you,

Your's faithfully

Dy. GM (Mining), Tasra Tasra Coal Mining Project BSL-Collieries Division, SAIL

Encl: As stated above.

#### Copy to:

- 1. Regional Officer, MoEF & CC, Ranchi.
- 2. Regional office, Dhanbad, Jharkhand.

#### [FORM -V]

#### (See rule 14)

Environment Statement for the financial year ending the 31st March 2024 for Tasra Coal Mining Project of M/s-Steel Authority of India Limited.

#### PART-A

i)	Name and address of the owner/occupier of the industry operation or process.
	Sri Sibaram Banerjee, GM I/C (Tasra & Chasnalla), Central Office, Collieries
	Division, BSL-Collieries, SAIL, Chasnalla, Dhanbad, Jharkhand- 828135

ii) Industry category: -

Mining, Code - 010232.

Primary (STC Code):

Primary (Opencast Coal Mine)

Secondary (STC Code):

**Integrated Iron & Steel Industry** 

Production capacity - Units:

Production Capacity: 4MTPA

OPENCAST COAL MINE PROJECT

(In the FY 2023-24, only 3,33,316 tonne of incidental coal has been produced as the mine is still in developmental stage due to

pending Land Acquisition)

Year of establishment:

2009.

iii) Date of the last environmental statement submitted: 28.04.2023

#### PART-B Water and River Material Consumption

(1) Water consumption m<sup>3</sup>/d:

Process

No process is involved in excavation of coal.

Cooling

Nil

Domestic

Nil (Township is yet to be developed)

Name of Products:

		During the previ Year	During the previous financial Year		financial
	COAL	Nil		Nil	//
ii	i) Raw Material Consum	ption			, -
	*Name of raw materials	Name of products		Consumption of raw Material per unit of or	
	·		During Previous fine (2022-23	ancial year	During the current financial year (2023-24)
H	S DIESEL	COAL &	0.42 litre/ton		0.56 litre/tonne
F	XPLOSIVES	OVER BURDEN	0.15 kg/tonne	!	0.16 kg/tonne

<sup>\*</sup>Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials used

PART-C

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

1) Pollutants	Quantity of pollutants	Concentration of	Percentage of variation from						
M. YORKA	discharged (mass /day)	pollutants in	prescribed standards with						
	F	discharges(mass/volume)	reasons						
a) Air ·	7 7 7								
b) Water	1. Quarterly Sampling a	ind analysis of PM10, PM	12.5, SO2 and NOx etc. have						
	been carried out from zone of Tasra OCP.	been carried out from stations established in the core zone as well as buffer							
	2. Monitoring of quality	ty of ground water, sur	rface water (upstream &						
	downstream of mine s	•	core zone and buffer zone						
	3. All parameters are wi	thin limit.							
	4. All parameters are analysis by an NABL Accredited/ISO9001:2008 and								
	OHSAS 18001:2007 c	OHSAS 18001:2007 certified lab M/s Adity R&D Service (Recognized by							
	Jharkhand State Pollt	ition Control Board), Sind	lri, Dhanbad, Jharkhand.						
	Ambient Air Quality and	Water Analysis reports e	nclosed as ANNEXURE- I.						

#### PART- D Hazardous Wastes

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

Haza	irdous Wastes	<u></u>	Kg)		
		During the previous Financial Year	<u>D</u>	uring the current Financial Year	
a) b)	From Process From Pollution control facilities  NO HAZARDOUS WASTES ARE GENERATED.				
		PART Solid W			
			Total Ç	Quantity	
		During the previous F 10,31,566.358	Y 2022-23	During the current FY 2023-24 7,49,505.632	
a) b)	From process From pollution (1) quantity rec	control facilityycled or re-utilised within the unit	NOT	APPLICABLE APPLICABLE solid waste generated is being	
•	(2)Sold (3)Disposed			ped in old abandoned pit in the ect area, previously worked by BCCL.	

<sup>\*</sup>Solid Wastes comprises broken overlying rocks of coal seams i.e. Over Burden.

#### PART-F

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

• No hazardous wastes are generated.

• However, solid waste in the form of broken overlying rocks of coal (i.e. Over burden) are generated from open cast mines. Solid wastes are disposed off in the de-coaled area (about 90%) and remaining 10% is disposed off in the over burden dump yards.

#### **PART-G**

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production:

- 1. Water sprinkling is being done in the quarry area, haul roads, dump yards, loading/unloading areas, weigh bridges, office and surrounding locality to suppress the dust and its generation.
- 2. HEMMs are under regular maintenance for control of noise.
- 3. Proper and controlled blasting techniques are undertaken to minimise blast induced ground vibration & noise
- 4. Piezometer has been installed for ground water level monitoring at Tasra OCP.
- 5. Drain cleaning all around of mine periphery area.
- 6. Rain water harvesting system has been installed at various points Chasnalla coal complex (23 units has been installed).
- 7. ROM Coal is transported from Tasra mine pit to CPP, Chasnalla by tarpaulin covered trucks. Entire coal is being transported by rail mode from railway siding of CCP to captive steel plant of SAIL.
- 8. PM10 Analyzer has been installed at Tasra Siding.
- 9. OB generated during small scale mining was used to fill up the old abandoned mine previously worked by M/S BCCL lying well within the earmarked OB dump area.
- 10. Coal production and waste excavation report enclosed as annexure-II.

#### PART-H

Additional measures / investment proposal for environmental protection including abatement of pollution, prevention of pollution:

Further improvement in dust suppression 02 (Two) numbers Mist Generators (Water mist cannon) have been installed at Tasra Siding. The mine is in initial development stage, temporary approach road is being maintained. Approach roads and haul roads are being maintained by road grader and continuous water sprinkling is being done for dust suppuration. Natural plants are there at all along of the temporary approach road.

#### **PART-I**

Any other particulars for improving the quality of the environment:

World Environment Day was celebrated on 5<sup>th</sup> June 2024 for spreading environmental awareness amongst the populace surrounding Tasra open cast project. Tree plantation drive was also conducted along the haul road of mine.

#### Annexure- I

Monitoring of Air Quality, Noise Level, and Analysis of Water samples at different points of Tasra OCP, SAIL – Collieries Division

Pre monsoon Season

**OF** 



SAIL

Tasra Colliery Division
Steel Authority of India Ltd.
Chasnala – 828135, DHANBAD



Prepared by:
ADITI R&D SERVICES
PLOT NO. I-B/17(P), SINDRI INDUSTRIAL AREA,
P.O.- DOMGARH, DIST. – DHANBAD-828107
(JHARKHAND)



#### Testing Laboratory

Recognised by Jharkhand State Pollution Control Board

AN ISO 9001:2008 and OHSAS 18001:2007 Certified Company

Plot No.- I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.-Dhanbad Jharkhand - 828107

Phone : 0326-2952377 Mobile : 09471358492

09431512608

Ref. No.: ARDS/23-24/ Env.Mon./Tasra/457

Date: 05.06.2023

To
The Chief General Manager (R&T)
Tasra Colliery,
SAIL-CD, Chasnalla
Dhanbad, Jharkhand.

Sub: Pre-Monsoon Environmental Monitoring Report of Tasra
OCP, SAIL- Colliery Division

Sir,

We are pleased to submit the Pre-Monsoon Environmental Monitoring Report vide Work Order No.: CD/CC/WO/2023-24/10 Dated 25.05.2023 conducted from 26.05.2023 to 27.05.2023 for Ambient Air Quality, Drinking Water, Surface Water and Noise level Monitoring for your kind perusal and record.

With Best Regards,

Encl: Environmental Monitoring Report

Yours faithfully,

**Technical Manager** 

P.D. DOMGARH DHANBAD



**Testing Laboratory** 

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Phone : 0326-2952377 Mobile : 09471358492

09431512608

#### INTRODUCTION ABOUT - ADITI R&D SERVICES

Aditi R&D Services (ARDS) – Testing Laboratory is providing specialized testing services to the industries of India from Nov, 2003. We have established our reputation as an organization committed to providing good quality of testing services in the field Environmental, Mechanical and Chemical Testing.

Aditi R&D Services (ARDS) – Testing Laboratory is well equipped with wide range of testing facilities in the field of Environmental, Mechanical Testing and Chemical Testing. The laboratory uses regulatory and widely accepted methods such as Indian Standards (IS).

Aditi R&D Services (ARDS) – Testing Laboratory is state of art Testing Laboratory managed by highly competent personnel and equipped with highly sophisticated and precise equipments for analyzing quality & Pollution Control.

Aditi R&D Services (ARDS) – Testing Laboratory is an independent organization and wishes to be a specialized testing laboratory (or third-party laboratory) to the industry.

In order to ensure highest quality of services the laboratory maintains the management system that fulfills the requirements of the customer, Recognized by the Jhakhand State Pollution Control Board and IS/ISO/IEC 17025:2017.



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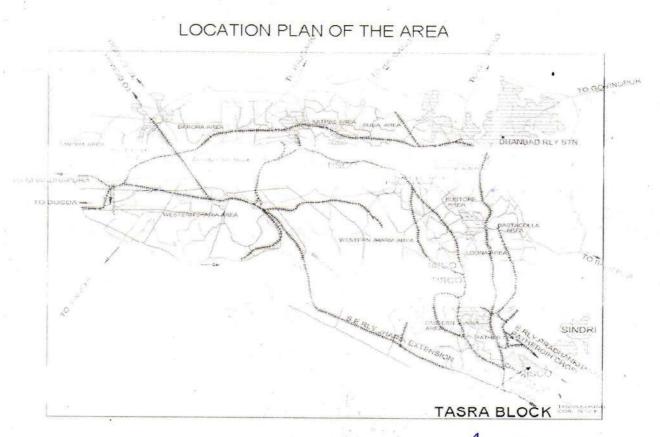
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#### **Brief Descriptions of TASRA OCP Project:**

Tasra is the eastern most colliery of Jharia coalfield and it was previously under BCCL. Steel Authority of India Ltd. (SAIL) proposes to exploit Tasra Block as captive mine by opencast working method to meet the demand of coking coal to different steel plants of the SAIL.

Tasra Block is located in the eastern most part of Jharia Coalfield, adjacent to Chasnalla colliery. It is 26 km south of the Dhanbad town and bounded by BIT, Sindri in the north, Damodar River in the south, FCIL in the east and Chasnala colliery in the west. The Dhanbad-Sindri road passes in the north-side of the block and the nearest railway station is Sindri, 4 km north of the block. It covers an area of 4.5 Kilometer Square and bounded by Latitude 23° 38'25" to 23°39'58"N and Longitude 86027'12" to 86029'15"E.



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Phone : 0326-2952377 Mobile : 09471358492 09431512608

Ref. No.: - ARDS/23-24/419 Date: 01.06.2023

#### **TEST REPORT OF AMBIENT AIR QUALITY**

Name of the industry : TASRA COLLIERY DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALA - 828135, DHANBAD,

Work Order Ref. NO.: : CD/CC/WO/2023-24/10 Dated- 25.05.2023

Date of Sample Collection : 26.05.2023 – 27.05.2023

Date of Testing : 28.05.2023 – 29.05.2023

Test Procedure : As per IS-5182

• Sampling Location : Near Devparbha Office Tasra

(Core Zone)

#### TEST RESULTS

	Avg. Ambient Temperature	Average Relative Humidity (%)		Sample 2	NAAQ - CPCB STANDARD	
	35	52	26.05.2023	27.05.2023		
SI No.	Particulars		Value	Value		
1.	Particulate Matt	ter (PM <sub>10</sub> ), µg/m <sup>3</sup>	88.12	85.10	100 µg/m <sup>3</sup>	
2.	Particulate Matt	ter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	49.84	48.36	60 μg/m <sup>3</sup>	
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		26.36	25.66	80 μg/m <sup>3</sup>	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>		22.40	21.50	80 µg/m³	
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		16.89	17.18	400 μg/m <sup>3</sup>	
6.	CO, mg/m <sup>3</sup>		0.92	0.68	4 mg/m³	
7.	Pb, µg/m³		0.001	0.002	<b>1</b> μg/m³	
8.	As, ng/m³		BDL	BDL	6 ng/m³	
9.	Ni, ng/m³		BDL	BDL	20 ng/m <sup>3</sup>	
10.	Benzene, µg/m	3	BDL	BDL	5 µg/m³	
11.	Benzoapyrene i	ng/m³	BDL	BDL	1 ng/m <sup>3</sup>	
12.	Ozone, µg/m³		13.40	11.50	180 µg/m³	

Sr. Chemist Aditi R&D Services P.O. SERVICES P.O. DOMGARHO W

Technical Manager Aditi R&D Services, Sindri



Testing Laboratory

Recognised by Jharkhand State Pollution Control Board AN ISO 9001:2008 and OHSAS 18001:2007 Certified Company

Plot No.- I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.-Dhanbad Jharkhand - 828107

Phone: 0326-2952377 Mobile: 09471358492

09431512608

Ref. No.: - ARDS/23-24/420 Date: 01.06.2023

#### TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry : TASRA COLLIERY DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALA - 828135, DHANBAD,

Work Order Ref. NO .: : CD/CC/WO/2023-24/10 Dated- 25.05.2023

Date of Sample Collection : 26.05.2023 - 27.05.2023

**Date of Testing** : 28.05.2023 - 29.05.2023 **Test Procedure** 

Sampling Location : Near Arya Samaj, Sindri

(Core Zone)

: As per IS-5182

#### TEST RESULTS

	Avg. Ambient Temperature	Average Relative Humidity (%)	Sample 1 S	Sample 2	NAAQ - CPCB STANDARD
	35	52	26.05.2023	27.05.2023	
SI No.	Particulars		Value	Value	*
1.	Particulate Mat	ter (PM <sub>10</sub> ), µg/m <sup>3</sup>	82.44	81.25	100 µg/m³
2.	Particulate Mat	ter (PM <sub>2.5</sub> ), µg/m³	45.56	46.35	60 µg/m³
3.	SO <sub>2</sub> , µg/m <sup>3</sup>	ga a g	24.60	24.47	80 µg/m³
4.	NO <sub>2</sub> , µg/m <sup>3</sup>		20.73	21.35	80 µg/m³
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		14.98	13.58	400 µg/m³
6.	CO, mg/m <sup>3</sup>		0.94	0.65	4 mg/m <sup>3</sup>
7.	Pb, µg/m³		BDL	BDL	1 µg/m³
8.	As, ng/m3		BDL	BDL	6 ng/m3
9.	Ni, ng/m3		BDL	BDL	20 ng/m3
10.	Benzene, µg/m3		BDL	BDL	5 μg/m3
11.	Benzoapyrene r	ng/m3	BDL	BDL	1 ng/m3
12.	Ozone, µg/m3		12.69	14.25	180 μg/m3

8.200 Sr. Chemist

Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri



#### **Testing Laboratory**

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Phone : 0326-2952377 Mobile : 09471358492

Date: 01.06.2023

09431512608

Ref. No.: - ARDS/23-24/421

TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry : TASRA COLLIERY DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALA - 828135, DHANBAD

Work Order Ref. NO.: : CD/CC/WO/2023-24/10 Dated- 25.05.2023

• Date of Sample Collection : 26.05.2023 – 27.05.2023

Date of Testing : 28.05.2023 – 29.05.2023

Test Procedure : As per IS-5182

Sampling Location : K.D. Colony Rorabandh

(Buffer Zone)

#### TEST RESULTS

	Avg. Ambient Temperature	Cample		Sample 2	NAAQ - CPCB STANDARD	
	35	52	26.05.2023	27.05.2023		
SI No.	Particulars	1	Value	Value	** 1	
1.	Particulate Matt	er (PM <sub>10</sub> ), µg/m <sup>3</sup>	76.53	77.20	100 µg/m³	
2.	Particulate Matt	er (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	40.81	39.36	60 µg/m³	
3.	SO <sub>2,</sub> µg/m <sup>3</sup>	F	23.04	22.52	80 μg/m <sup>3</sup>	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>	K	18.93	19.58	80 µg/m³	
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		17.54	16.55	400 µg/m³	
6.	CO, mg/m <sup>3</sup>		0.82	0.90	4 mg/m <sup>3</sup>	
7.	Pb, μg/m³		BDL	BDL	1 μg/m³	
8.	As, ng/m3		BDL	BDL	6 ng/m3	
9.	Ni, ng/m3		BDL	BDL	20 ng/m3	
10.	Benzene, µg/m3	3	BDL	BDL	5 μg/m3	
11.	Benzoapyrene r	ng/m3	BDL	BDL	1 ng/m3	
12.	Ozone, µg/m3	·	13.69	15.24	180 μg/m3	

Sr. Chemist Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri



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Phone : 0326-2952377 Mobile : 09471358492

09431512608

Ref. No.: - ARDS/23-24/422 Date: 01.06.2023

#### TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry : TASRA COLLIERY DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALA - 828135, DHANBAD,

Work Order Ref. NO.: : CD/CC/WO/2023-24/10 Dated- 25.05.2023

Date of Sample Collection : 26.05.2023 – 27.05.2023

Date of Testing : 28.05.2023 – 29.05.2023

Test Procedure : As per IS-5182

• Sampling Location : SINDRI INDUSTRIAL AREA, PLOT NO.- I-B -17(P)

DOMGARH SINDRI (BUFFER ZONE)

#### TEST RESULTS

	Avg. Ambient Temperature	Average Relative Humidity (%)	Sample 1	Sample 2	NAAQ - CPCB STANDARD
	35	52	26.05.2023	27.05.2023	
SI No.	Particulars		Value	Value	
1.	Particulate Matt	ter (PM <sub>10</sub> ), µg/m <sup>3</sup>	76.48	75.82	<b>100</b> μg/m <sup>3</sup>
2.	Particulate Matt	ter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	40.96	39.46	60 µg/m <sup>3</sup>
3.	SO <sub>2</sub> , μg/m <sup>3</sup> NO <sub>2</sub> , μg/m <sup>3</sup>		28.40	29.25	80 μg/m <sup>3</sup>
4.			21.76	20.34	80 µg/m³
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		16.90	17.58	400 μg/m <sup>3</sup>
6.	CO, mg/m <sup>3</sup>		0.90	0.85	4 mg/m <sup>3</sup>
7.	Pb, µg/m³		BDL	BDL	1 μg/m³
8.	As, ng/m3		BDL	BDL	6 ng/m3
9.	Ni, ng/m3 Benzene, µg/m3		BDL	BDL	20 ng/m3
10.			BDL	BDL	5 μg/m3
11.	Benzoapyrene	ng/m3	BDL	BDL	1 ng/m3
12.	Ozone, µg/m3	F. 3	11.25	12.58	180 μg/m3

Sr. Chemist

Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri



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Plot No.- I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.-Dhanbad

Jharkhand - 828107

Phone : 0326-2952377 Mobile : 09471358492

09431512608

#### TEST REPORT OF NOISE (AMBIENT) LEVEL MONITORING

	Ref. No. & Date				NAME AND ADDRESS OF THE CLIENT					
AR	DS/23-24/ 423	Date: 0	1.06.202	23	TASRA COLLIERY DIVISION					
Ville	Date of N	lonitorir	ng		STEEL AUTHORITY OF INDIA LTD.					
						CHASN	ALA - 828	135, DHANB	AD	
	26.05.2023 T		Avg. Ambient		Average Humidity (%)	Weather Condition	Status of the plant			
Work Order CD/CC/WO/2023-24/10 Dated- 25.05.2023				10	35		52	Clear	Running	
				MO	NITORING	RESUL	TS			
SI. No	Place of Monitoring	(6	Day Time Night Time for I CF (6 AM to 10 PM) (10 PM to 6 AM) (Ame Avg. dB(A) Avg. dB(A) notif		for Industr CPCB No (Regulatio (Amendmen notified vio	imbient standard rial Area as per plise Pollution n and Control) nt) Rules , 2000 de S.O. 1046(E) 2.11.2020 n dB(A) Leq				
								Day Time	Night Time	
	LOCATION	MAX	MIN	AVG. dB(A) Leq	1017.57	MIN	AVERAGE dB(A) Leq	Industrial Area	Industrial Area	
СО	RE ZONE					-				
1.	Tasra (Near Mine Site)	72.6	66.8	70.60	66.74	60.68	64.69			
2.	Weigh Bridge	68.4	59.7	65.94	62.80	58.55	61.18	75	70	
BU	FFER ZONE			2000				Residential Area	Residential Area	
1.	KD Colony Rohrabandh	50.92	46.71	49.31	42.39	32.96	39.85			
2.	SINDRI INDUSTRIAL AREA, PLOT NO I-B -17(P)	51.27	46.40	49.48	44.30	34.44	41.72	55	45	
3.	GM OFFICE, TASRA	46.84	43.56	45.50	39.63	29.36	37.01			
4.	NEAR ARYA SAMAJ	49.69	42.99	47.52	40.86	30.68	38.25			

Sr. Chemist Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri



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Phone : 0326-2952377 Mobile : 09471358492

09431512608

TEST REPORT OF BRINK	NG WATER FOR THE	MONTH OF MAY 2023	2987135至497		
Ref. No. & Date	NAME AND	ADDRESS OF THE CLIENT			
ARDS/23-24/424 Dt. 01.06.2023					
P.O. NO. & Date	CD/CC/WO/2023-24/10 Dated- 25.05.2023				
Season		PRE MONSOON			
Location of Sample	KD COLONY F	ROHARABAND (BUFFER ZON	IE)		
Sample Description		GROUND WATER			
		Analysis Started on	27.05.2023		
Date of Sample Collection	26.05.2023	Analysis completed on	31.05.2023		
Test Procedure		18:3025			

	Test Procedure	IS	5:3025	
	TEST I	RESULT	ingste ustile	
SI.	Parameters	Value	IS: 10500	0: 2012
No.			Accepted Limit	Permissible Limit
1.	Colour Hazen units	1	5	15
2.	Odour	Agreeable	Agreeable	Agreeable
3.	Taste	Agreeable	Agreeable	Agreeable
4.	Turbidity NTU Max	NIL	1	5
5.	Total Dissolved Solids mg/l, Max	509	500	2000
6.	pH Value	8.2	6.5 to 8.5	
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	352	200	600
8.	Calcium (as Ca) mg/l, Max	88	75	200
9.	Magnesium (as Mg)mg/l, Max	31.6	30	100
10.	Copper (as Cu) mg/l, Max	0.001	0.05	1.5
11.	Iron (as Fe) mg/l Max	0.01	0.3	NR
12.	Manganese (as Mn) mg/l, Max	<0.001	0.1	0.3
13.	Chlorides (as CI) mg/l, Max	46	250 •	1000
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	72	200	400
15.	Nitrate mg/l, (as NO <sub>3)</sub>	10.3	45	NR
16.	Fluoride (as F) mg/l	0.70	1.0	1.5
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max		0.001	0.002
18.	Mercury (as Hg)mg/l, Max	-	0.001	NR
19.	Cadmium (as Cd) mg/l, Max		0,01	NR
20.	Selenium (as Se mg/l, Max		0.01	NR
21.	Arsenic (as As) mg/l, Max	<0.001	0.01	0.05
22.	Cyanide (as Cn) mg/l, Max	<0.001	0.05	NR
23.	Lead (As Pb) mg/l Max	<0.001	0.05	NR
24.	Zinc (as Zn) mg/l Max	0.020	5.0	15
25.	Arionic detergents (as MBAS), mg/l, Max	-	0.2	1.0
26.	Chromium (as Cr+ <sup>6</sup> ) mg/l	0.004	0.05	NR
27.	Mineral Oil mg/l, Max		0.01	NR
28.	Residual, free chlorine mg/l, Min	NIL	0.2	1.0

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS – 10500 : 2012

R-.No Relaxation

Sr. Chemist Aditi R&D Services P.O. DOMGARH DHANBAD

Technical Manager Aditi R&D Services, Sindri



Testing Laboratory

Recognised by Jharkhand State Pollution Control Board
AN ISO 9001:2008 and OHSAS 18001:2007 Certified Company

Plot No.- I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.-Dhanbad Jharkhand - 828107

Phone : 0326-2952377 Mobile : 09471358492

09431512608

TEST REPORT OF DRINKING WATER FOR THE MONTH OF MAY 2023

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT				
ARDS/23-24/425	TASRA COLLIERY DIVISION				
Dt. 01.06.2023	STEEL A	UTHORITY OF INDIA LTD.			
	CHASNALA – 828135, DHANBAD				
P.O. NO. & Date	CD/CC/WO/2023-24/10 Dated- 25.05.2023				
Season		PRE MONSOON			
Location of Sample	DUBEY CO	LONY TASRA (CORE ZONE)			
Sample Description		Ground Water			
		Analysis Started on	27.05.2023		
Date of Sample Collection	26.05.2023	Analysis completed on	31.05.2023		
Test Procedure		IS:3025			

	TEST	RESULT		
SI.	Parameters	Value	IS: 10500	0: 2012
No.		J	Accepted Limit	Permissible Limit
1.	Colour Hazen units	1	5	15
2.	Odour	Agreeable	Agreeable	Agreeable
3.	Taste	Agreeable	Agreeable	Agreeable
4.	Turbidity NTU Max	NIL	1	5
5.	Total Dissolved Solids mg/l, Max	769	500	2000
6.	pH Value	6.8	6.5 to 8.5	
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	532	200	600
8.	Calcium (as Ca) mg/l, Max	139.2	75	200
9.	Magnesium (as Mg)mg/l, Max	44.2	30	100
10.	Copper (as Cu) mg/l, Max	0.001	0.05	1.5
11.	Iron (as Fe) mg/l Max	0.01	0.3	NR ·
12.	Manganese (as Mn) mg/l, Max	< 0.001	0.1	0.3
13.	Chlorides (as CI) mg/l, Max	86	250 •	1000
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	79	200	400
15.	Nitrate mg/l, (as NO <sub>3)</sub>	12.3	45	NR
16.	Fluoride (as F) mg/l	0.96	1.0	1.5
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max		0.001	0.002
18.	Mercury (as Hg)mg/l, Max		0.001	- NR
19.	Cadmium (as Cd) mg/l, Max		0.01	NR
20.	Selenium (as Se mg/l, Max	-	0.01	NR
21.	Arsenic (as As) mg/l, Max	< 0.001	0.01	0.05
22.	Cyanide (as Cn) mg/l, Max	< 0.001	0.05	NR
23.	Lead (As Pb) mg/l Max	0.007	0.05	NR
24.	Zinc (as Zn) mg/l Max	0.097	5.0	15
25.	Arionic detergents (as MBAS), mg/l, Max	-	0.2	1.0
26.	Chromium (as Cr+ <sup>6</sup> ) mg/l	0.007	0.05	NR
27.	Mineral Oil mg/l, Max		0.01	NR
28.	Residual, free chlorine mg/l, Min	NIL	0.2	1.0

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS – 10500: 2012

NR- No Relaxation

Sr. Chemist Aditi R&D Services P.O.DHANBAD

Technical Manager Aditi R&D Services, Sindri



#### **Testing Laboratory**

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AN ISO 9001:2008 and OHSAS 18001:2007 Certified Company

Plot No.- I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.-Dhanbad Jharkhand - 828107

Phone : 0326-2952377 Mobile : 09471358492

09431512608

TEST REPORT OF DRINKING WATER FOR THE MONTH OF MAY 2023

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT				
ARDS/23-24/426 Dt. 01.06.2023	TASRA COLLIERY DIVISION STEEL AUTHORITY OF INDIA LTD. CHASNALA – 828135, DHANBAD				
P.O. NO. & Date	CD/CC/WO/2023-24/10 Dated- 25.05.2023				
Season	PRE MONSOON				
Location of Sample	ARYA SAM	IAJ, SINDRI (BUFFER ZONE)			
Sample Description	4 3	Ground Water			
Cumpic 2 secupation	4	Analysis Started on	27.05.2023		
Date of Sample Collection	26.05.2023	Analysis completed on	31.05.2023		
Test Procedure	IS:3025				

SI.	Parameters	Value	IS: 10500	0: 2012
No.	The second secon		Accepted Limit	Permissible Limit
1.	Colour Hazen units	1	5	15
2.	Odour	Agreeable	Agreeable	Agreeable
3.	Taste	Agreeable	Agreeable	Agreeable
4.	Turbidity NTU Max	1	1	- 5
5.	Total Dissolved Solids mg/l, Max	744	500	2000
6.	pH Value	6.9	6.5 to 8.5	XIII.
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	496	200	600
8.	Calcium (as Ca) mg/l, Max	145.6	75	200
9.	Magnesium (as Mg)mg/l, Max	31.6	30	100
10.	Copper (as Cu) mg/l, Max	0.002	0.05	1.5
11.	Iron (as Fe) mg/l Max	0.02	0.3	NR
12.	Manganese (as Mn) mg/l, Max	0.01	0.1	0.3
13.	Chlorides (as CI) mg/l, Max	84	250	1000
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	84	200	400
15.	Nitrate mg/l, (as NO <sub>3)</sub>	4.3	45	NR
16.	Fluoride (as F) mg/l	0.86	1.0	1.5
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	-	0.001	0.002
18.	Mercury (as Hg)mg/l, Max		0.001	NR
19.	Cadmium (as Cd) mg/l, Max	-	0.01	NR
20.	Selenium (as Se mg/l, Max		0.01	NR
21.	Arsenic (as As) mg/l, Max	< 0.001	0.01	0.05
22.	Cyanide (as Cn) mg/l, Max	<0.001	0.05	NR
23.	Lead (As Pb) mg/l Max	0.024	0.05	NR
24.	Zinc (as Zn) mg/l Max	0.026	5.0	15
25.	Arionic detergents (as MBAS), mg/l, Max		0.2	1.0
26.	Chromium (as Cr+ <sup>6</sup> ) mg/l	0.016	0.05	NR
27.	Mineral Oil mg/l, Max	-	0.01	NR
28.	Residual, free chlorine mg/l, Min	NIL	0.2	1.0

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS – 10500 : 2012

NR. No Relaxation

Sr. Chemist Aditi R&D Services

P.O. DOMGARH CON DHANBAD

Technical Manager Aditi R&D Services, Sindri



#### Testing Laboratory

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AN ISO 9001:2008 and OHSAS 18001:2007 Certified Company

Plot No.- I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.-Dhanbad Jharkhand - 828107

Phone : 0326-2952377 Mobile : 09471358492 09431512608

#### TEST REPORT OF SURFACE WATER FOR THE MONTH OF MAY 2023

NAME AND ADDRESS OF THE CLIENT				
TASRA COLLIERY DIVISION				
STEEL AUTHORITY OF INDIA LTD.				
CHASNALA – 828135, DHANBAD				
CD/CC/WO/2023-24/10 Dated- 25.05.2023				
PR	E MONSOON			
Sample F MINE SITE (BUFFER ZONE)	Analysis Started on	27.05.2023		
26.05.2023/ 02:40PM Analysis completed on 31.05.202				
IS:3025				
	TASRA CO STEEL AUTH CHASNALA CD/CC/WO/2023 PR Sample OF MINE SITE (BUFFER ZONE)	TASRA COLLIERY DIVISION STEEL AUTHORITY OF INDIA LTD CHASNALA – 828135, DHANBAD CD/CC/WO/2023-24/10 Dated- 25.05.202 PRE MONSOON  Sample F MINE SITE (BUFFER ZONE) Analysis Started on Analysis completed on		

	TEST RE	SULT	(1816年) - Marcalli (1816年) - 1816年)
SI. No.	Parameters	Value	(IS :2296) Surface Water Class "C" Tolerance Limit
1.	Colour Hazen units	3	300
2.	Dissolved Oxygen, mg/l	6.8	4
3.	BOD (3 days at 27°C)	2.2	3
4.	Total Dissolved Solids mg/l, Max	261	1500
5.	pH Value	8.2	6.5 - 8.5
6.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	160	NS
7.	Calcium (as Ca) mg/l, Max	35.2	NS
8.	Magnesium (as Mg)mg/l, Max	17.2	NS
9.	Copper (as Cu) mg/l, Max	0.001	1.5
10.	Iron (as Fe) mg/l Max	0.01	• 50
11.	Manganese (as Mn) mg/l, Max	<0.001	NS
12.	Chlorides (as CI) mg/l, Max	22	600
13.	Sulphate (as SO <sub>4</sub> ) mg/l Max	78	400
14.	Nitrate mg/l, (as NO <sub>3)</sub>	8.5	50
15.	Fluoride (as F) mg/l	0.66	1.5
16.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	<0.001	0.005
17.	Cadmium (as Cd) mg/l, Max	<0.001	0.01
18.	Oil and grease, mg/l	BDL	0.1
19.	Arsenic (as As) mg/l, Max	<0.001	0.2
20.	Sodium (as Na) mg/l, Max	4	NS
21.	Lead (As Pb) mg/l Max	0.004	0.1
22.	Zinc (as Zn) mg/l Max	0.014	15
23.	Potassium as K)	1	NS
24.	Hexavalent Chromium (as Cr6 <sup>+</sup> ) mg/l, Max	<0.001	0.05

Remarks: All the parameters of samples tested are within the permissible limit of General standard. BDL – Below Detection Limit

NS - Not Specified

Sr. Chemist Aditi R&D Services P.O. DHANBAD

Technical Manager Aditi R&D Services, Sindri



#### Testing Laboratory .

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Phone : 0326-2952377 Mobile : 09471358492

09431512608

TEST REPORT OF SURFACE WATER FOR THE MONTH OF MAY 2023

TEST REPORT OF 30R	TACE WATER FOR THE INI	UNTH OF WAY 2023			
Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT				
ARDS/23-24/428	TASRA COLLIERY DIVISION				
Dt. 01.06.2023	STEEL AUTHORITY OF INDIA LTD.				
	CHASNALA – 828135, DHANBAD				
P.O. NO. & Date	CD/CC/WO/2023-24/10 Dated- 25.05.2023				
Season	PRI	E MONSOON			
Location of S		Analysis Started on	27.05.2023		
Date & Time Sample Collection	26.05.2023/ 02:40PM Analysis completed on 31.05.202				
Test Procedure		IS:3025			
	TEST RESULT				

-	Test i recedure	13.302	J
	TEST RE	SULT	
SI. No.	Parameters	Value	(IS :2296) Surface Water Class "C" Tolerance Limit
1.	Colour Hazen units	2	300
2.	Dissolved Oxygen, mg/l	7.2	4
3.	BOD (3 days at 27°C)	2.0	3
4.	Total Dissolved Solids mg/l, Max	255	1500
5.	pH Value	8.3	6.5 - 8.5
6.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	152	NS
7.	Calcium (as Ca) mg/l, Max	32	NS
8.	Magnesium (as Mg)mg/l, Max	17.2	NS
9.	Copper (as Cu) mg/l, Max	0.001	1.5
10.	Iron (as Fe) mg/l Max	0.01	• 50
11.	Manganese (as Mn) mg/l, Max	<0.001	NS
12.	Chlorides (as CI) mg/l, Max	20	600
13.	Sulphate (as SO <sub>4</sub> ) mg/l Max	73	400
14.	Nitrate mg/l, (as NO <sub>3)</sub>	9.9	50
15.	Fluoride (as F) mg/l	0.67	1.5
16.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	<0.001	0.005
17.	Cadmium (as Cd) mg/l, Max	<0.001	0.01
18.	Oil and grease, mg/l	BDL	0.1
19.	Arsenic (as As) mg/l, Max	<0.001	0.2
20.	Sodium (as Na) mg/l, Max	7.1	NS
21.	Lead (As Pb) mg/l Max	< 0.001	0.1
22.	Zinc (as Zn) mg/l Max	0.018	15
23.	Potassium as K)	1.3	NS
24.	Hexavalent Chromium (as Cr6 <sup>+</sup> ) mg/l, Max	< 0.001	0.05

Remarks: All the parameters of samples tested are within the permissible limit of General standard. BDL – Below Detection Limit

NS - Not Specified

Sr. Chemist Aditi R&D Services OOMGARH VOICE

Technical Mañager Aditi R&D Services, Sindri

Email ID: sindriaditi@gmail.com.

Website: aditirndservices.com



#### Testing Laboratory

Recognised by Jharkhand State Pollution Control Board AN ISO 9001:2008 and OHSAS 18001:2007 Certified Company

Plot No.- I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.-Dhanbad Jharkhand - 828107

Phone : 0326-2952377 Mobile: 09471358492

09431512608

### TEST REPORT OF EFFLUENT WATER FOR THE MONTH OF MAY 2023

	Ref. No. & Date	N/	AME AND	ADDI	RESS OF THE CLIE	NT
	ARDS/23-24/430 Dt. 01.06.2023	TASRA COLLIERY DIVISION STEEL AUTHORITY OF INDIA LTD. CHASNALA – 828135, DHANBAD				
100	P.O. NO. & DATE	CD/CC/WO/2023-24/10 DATED- 25.05.2023				
	SEASON			PRE N	MONSOON	
	Sample Description		a j	MINE	WATER	
	Location of Sample	TASRA EXIS MINE PIT, TAS (CORE ZO	RA OCP	An	alysis Started on	27.05.2023
	Date & Time Sample Collection	26.05.2023 03:20 PM		Analysis completed on		31.05.2023
	Test Procedure	August Cont	TO THE	IS	:3025	
		TEST RES	ULT			
SI. No.	Parameters	Unit	Value	е	Effluent W	
1.	pH value		7.0		5.5 to 9.0	
2.	Colour,	Hazen units,	(<5)		5	
3.	Odour*		Agreea	ble	Annexure-1	
4.	Conductivity, µS/cm	μS/cm	880		NS	
5.	Turbidity (NTU)	NTU	1		NS	
6.	Total Dissolved Solids mg/l	mg/I	568	110		- 'V
7.	Suspended Solids mg/l, max,	mg/l	14			
8	Dissolved Oxygen (DO)	mg/I	7.0		NS	
9.	Oil and grease, mg/l	mg/l	0.4		10	
10.	Phenolic compounds (as	mg/I max	0.4 <0.01		10	

Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri

# Monitoring of Air Quality, Noise Level, and Analysis of Water samples at different points of Tasra OCP, SAIL – Collieries Division

**Monsoon Season** 

OF



SAIL

Tasra Colliery Division
Steel Authority of India Ltd.
Chasnala – 828135, DHANBAD



Prepared by:
ADITI R&D SERVICES
PLOT NO. I-B/17(P), SINDRI INDUSTRIAL AREA,
P.O.- DOMGARH, DIST. – DHANBAD-828107
(JHARKHAND)



### ADITI R&D SERVICES Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad

#### Testing Laboratory

Recognised by Jharkhand State Pollution Control Board AN ISO 9001:2008 and OHSAS 18001:2007 Certified Compan

Plot No. - I-B-17 (P) Sindri, Industrial Area, Jharkhand - 828107

Phone: 0326-2952377 Mobile: 09471358492

09431512608

Ref. No.: ARDS/23-24/ Env.Mon./Tasra/0970

Date: 25.08.2023

To The Chief General Manager (R&T) Tasra Colliery, SAIL-CD, Chasnalla Dhanbad, Jharkhand.

> Sub: Monsoon Environmental Monitoring Report of Tasra OCP, SAIL- Colliery Division

Sir,

We are pleased to submit the Monsoon Environmental Monitoring Report vide Work Order No.: CD/CC/WO/2023-24/10 Dated 25.05.2023 conducted from 16.08.2023 to 17.08.2023 for Ambient Air Quality, Drinking Water, Surface Water and Noise level Monitoring for your kind perusal and record.

With Best Regards,

**Encl: Environmental Monitoring Report** 

Yours faithfully,

Technical Manager

Email ID · sindriaditi@gmail.com

Website: aditirndservices.com



Testing Laboratory

Recognised by Jharkhand State Pollution Control Board
AN ISO 9001:2008 and OHSAS 18001:2007 Certified Compa

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Phone : 0326-2952377 Mobile : 09471358492

09431512608

### INTRODUCTION ABOUT - ADITI R&D SERVICES

Aditi R&D Services (ARDS) – Testing Laboratory is providing specialized testing services to the industries of India from Nov, 2003. We have established our reputation as an organization committed to providing good quality of testing services in the field Environmental, Mechanical and Chemical Testing.

Aditi R&D Services (ARDS) – Testing Laboratory is well equipped with wide range of testing facilities in the field of Environmental, Mechanical Testing and Chemical Testing. The laboratory uses regulatory and widely accepted methods such as Indian Standards (IS).

Aditi R&D Services (ARDS) – Testing Laboratory is state of art Testing Laboratory managed by highly competent personnel and equipped with highly sophisticated and precise equipments for analyzing quality & Pollution Control.

Aditi R&D Services (ARDS) – Testing Laboratory is an independent organization and wishes to be a specialized testing laboratory (or third-party laboratory) to the industry.

In order to ensure highest quality of services the laboratory maintains the management system that fulfills the requirements of the customer, Recognized by the Jhakhand State Pollution Control Board and IS/ISO/IEC 17025:2017.

P.O. DOMGARH DHANBAD

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### ADITI R&D SERVICES Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad

Testing Laboratory

Recognised by Jharkhand State Pollution Control Board AN ISO 9001:2008 and OHSAS 18001:2007 Certified Compan

Plot No. - I-B-17 (P) Sindri, Industrial Area, Jharkhand - 828107

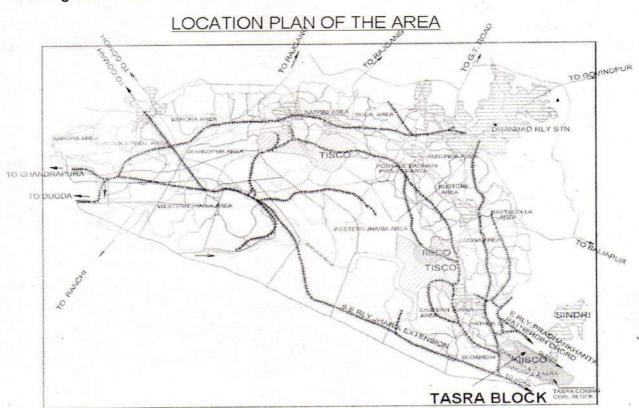
Phone: 0326-2952377 Mobile: 09471358492

09431512608

#### **Brief Descriptions of TASRA OCP Project:**

Tasra is the eastern most colliery of Jharia coalfield and it was previously under BCCL. Steel Authority of India Ltd. (SAIL) proposes to exploit Tasra Block as captive mine by opencast working method to meet the demand of coking coal to different steel plants of the SAIL.

Tasra Block is located in the eastern most part of Jharia Coalfield, adjacent to Chasnalla colliery. It is 26 km south of the Dhanbad town and bounded by BIT, Sindri in the north, Damodar River in the south, FCIL in the east and Chasnala colliery in the west. The Dhanbad-Sindri road passes in the north-side of the block and the nearest railway station is Sindri, 4 km north of the block. It covers an area of 4.5 Kilometer Square and bounded by Latitude 23° 38'25" to 23°39'58"N and Longitude 86027'12" to 86029'15"E.







#### Testing Laboratory

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Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Phone: 0326-2952377 Mobile: 09471358492

09431512608

Ref. No.: - ARDS/23-24/971

Date: 25.08.2023

#### TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry

: TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order Ref. NO.:

: CD/CC/WO/2023-24/10 Dated- 25.05.2023

Date of Sample Collection : 16.08.2023 - 18.08.2023

**Date of Testing** 

: 19.08.2023 - 22.08.2023

**Test Procedure** 

: As per IS - 5182

Sampling Location

: Near Devparbha Office Tasra

(Core Zone)

#### TEST RESULTS

	Avg. Ambient Temperature	Average Relative Humidity (%)	Sample 1	Sample 2	NAAQ - CPCB STANDARD
	32	72	16.08.2023	-	STANDARD
			17.08.2023	18.08.2023	
SI No.	Particulars		Value	Value	
1.	Particulate Mat	ter (PM <sub>10</sub> ), µg/m <sup>3</sup>	87.14	83.75	100 μg/m <sup>3</sup>
2.	Particulate Mat	ter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	47.45	45.63	60 µg/m <sup>3</sup>
3.	SO <sub>2,</sub> µg/m <sup>3</sup>		36.30	35.61	80 µg/m³
4.	NO <sub>2</sub> , µg/m <sup>3</sup>		20.42	19.86	80 μg/m <sup>3</sup>
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		16.12	17.25	400 μg/m <sup>3</sup>
6.	CO, mg/m <sup>3</sup>		0.83	0.78	4 mg/m <sup>3</sup>
7.	Pb, µg/m³		0.001	BDL	1 µg/m³
8.	As, ng/m <sup>3</sup>		BDL	BDL	6ng/m <sup>3</sup>
9.	Ni, ng/m³		BDL	BDL	20ng/m³
10.	Benzene, µg/m	3	BDL	BDL	5 μg/m³
11.	Benzoapyrener		BDL	BDL	1ng/m³
12.	Ozone, µg/m³		14.34	10.66	180 µg/m <sup>3</sup>

S. D DUY Sr. Chemist Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri



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Phone: 0326-2952377 Mobile: 09471358492

09431512608

Ref. No.: - ARDS/23-24/972

Date: 25.08.2023

#### TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry

: TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order Ref. NO .:

:CD/CC/WO/2023-24/10 Dated- 25.05.2023

Date of Sample Collection : 16.08.2023 - 18.08.2023

**Date of Testing** 

: 19.08.2023 - 22.08.2023

**Test Procedure** 

: As per IS-5182

Sampling Location

: Near Arya Samaj, Sindri

(Core Zone)

#### TEST RESULTS

	Avg. Ambient Temperature	Average Relative Humidity (%)	Sample 1	Sample 2	NAAQ - CPCB STANDARD
	32	72	16.08.2023 - 17.08.2023	17.08.2023 - 18.08.2023	
SI No.	Particulars	71	Value	Value	
1.	Particulate Matt	ter (PM <sub>10</sub> ), µg/m <sup>3</sup>	84.58	82.99	100 µg/m³
2.	Particulate Matt	er (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	46.55	44.79	60 μg/m <sup>3</sup>
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		28.96	27.22	80 µg/m³
4.	NO <sub>2</sub> , µg/m <sup>3</sup>		21.76	19.59	80 µg/m³
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		15.50	13.84	400 μg/m <sup>3</sup>
6.	CO, mg/m <sup>3</sup>		0.96	0.76	4 mg/m <sup>3</sup>
7.	Pb, µg/m³		0.001	0.001	1 μg/m³
8.	As, ng/m3		BDL	BDL	6ng/m3
9.	Ni, ng/m3		BDL	BDL	20ng/m3
10.	Benzene, µg/m	3	BDL	BDL	5 μg/m3
11.	Benzoapyrener	ıg/m3	BDL	BDL	1ng/m3
12.	Ozone, µg/m3		14.73	12.96	180 μg/m3

8.2. QU Sr. Chemist Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri



#### Testing Laboratory

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AN ISO 9001:2008 and OHSAS 18001:2007 Certified Compar

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Phone: 0326-2952377 Mobile: 09471358492

09431512608

Ref. No.: - ARDS/23-24/973

Name of the industry

: TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

Date: 25.08.2023

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order Ref. NO .:

:CD/CC/WO/2023-24/10 Dated- 25.05.2023

Date of Sample Collection : 16.08.2023 - 18.08.2023

TEST REPORT OF AMBIENT AIR QUALITY

**Date of Testing** 

: 19.08.2023 - 22.08.2023

**Test Procedure** 

: As per IS-5182

Sampling Location

: K.D. Colony Rorabandh

(Buffer Zone)

#### TEST RESULTS

	Avg. Ambient Temperature	Average Relative Humidity (%)	Sample 1	Sample 2	NAAQ - CPCB STANDARD
	32	72	16.08.2023 - 17.08.2023	17.08.2023 - 18.08.2023	
SI No.	Particulars		Value	Value	
1.	Particulate Mat	ter (PM <sub>10</sub> ), µg/m <sup>3</sup>	72.70	69.15	100 µg/m³
2.	Particulate Mat	ter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	39.48	37.93	60 µg/m <sup>3</sup>
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		22.34	21.58	80 µg/m <sup>3</sup>
4.	NO <sub>2</sub> , µg/m <sup>3</sup>		19.89	17.95	80 µg/m³
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		16.75	14.65	400 μg/m <sup>3</sup>
6.	CO, mg/m <sup>3</sup>		0.92	0.71	4 mg/m <sup>3</sup>
7.	Pb, µg/m³		BDL	BDL	1 µg/m³
8.	As, ng/m3		BDL	BDL	6ng/m3
9.	Ni, ng/m3		BDL	BDL	20ng/m3
10.	Benzene, µg/m	3	BDL	BDL	5 μg/m3
11.	Benzoapyrener	ıg/m3	BDL	BDL	1ng/m3
12.	Ozone, µg/m3		15.36	13.54	180 μg/m3

8-200 Sr. Chemist ( Aditi R&D Services

Technical Aditi R&D Services, Sindri

Website: aditirndservices.com Fmail ID: sindriaditi@gmail.com.



#### Testing Laboratory

Recognised by Jharkhand State Pollution Control Board

AN ISO 9001:2008 and OHSAS 18001:2007 Certified Compa

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Phone: 0326-2952377 Mobile: 09471358492

09431512608

Ref. No.: - ARDS/23-24/974

Date: 25.08.2023

#### TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry

: TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order Ref. NO .:

:CD/CC/WO/2023-24/10 Dated- 25.05.2023

Date of Sample Collection : 16.08.2023 - 18.08.2023

**Date of Testing** 

: 19.08.2023 - 22.08.2023

**Test Procedure** 

: As per IS-5182

Sampling Location

: G.M. OFFICE CHASNALLA

#### TEST RESULTS

	Avg. Ambient Temperature	Average Relative Humidity (%)	Sample 1	Sample 2	NAAQ - CPCB STANDARD
	32	72	16.08.2023 - 17.08.2023	17.08.2023 - 18.08.2023	
SI No.	Particulars		Value	Value	
1.	Particulate Matt	ter (PM <sub>10</sub> ), µg/m <sup>3</sup>	74.19	70.41	100 µg/m <sup>3</sup>
2.	Particulate Matt	er (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	38.94	36.49	60 μg/m <sup>3</sup>
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		27.92	25.29	80 μg/m <sup>3</sup>
4.	NO <sub>2</sub> , µg/m <sup>3</sup>		20.71	18.30	80 µg/m³
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		16.87	14.57	400 μg/m <sup>3</sup>
6.	CO, mg/m <sup>3</sup>		0.82	0.68	4 mg/m <sup>3</sup>
7.	Pb, µg/m³		BDL	BDL	1 μg/m³
8.	As, ng/m3		BDL	BDL	6ng/m3
9.	Ni, ng/m3		BDL	BDL	20ng/m3
10.	Benzene, µg/m	3	BDL	BDL	5 μg/m3
11.	Benzoapyrenen	ıg/m3	BDL	BDL	1ng/m3
12.	Ozone, µg/m3		12.82	10.52	180 μg/m3

8.200 Sr. Chemist Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri



Testing Laboratory

Recognised by Jharkhand State Pollution Control Board
AN ISO 9001:2008 and OHSAS 18001:2007 Certified Compa

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Phone: 0326-2952377 Mobile: 09471358492

09431512608

#### TEST REPORT OF NOISE (AMBIENT) LEVEL MONITORING

W	Ref. No.	& Date			NAME AND ADDRESS OF THE CLIENT TASRA COAL MINING PROJECT, COLLIERIES DIVISION,				
ARI	DS/23-24/975 Date of M		5.08.202 g	3 TA	S1	TEEL A	UTHORIT	CT, COLLIERI Y OF INDIA L 5, DIST DHA	TD.
16.08.2023 TO 17.08.2023				Avg. Ambient Temperature (°C)		verage umidity (%)	Weather Condition	Status of the plant	
Work Order CD/CC/WO/2023-24/10 Dated- 25.05.2023			0	32		72	Cloudy	Running	
				MON	TORING	RESUL	TS		
SI. No	Place of Monitoring	Day Time (6 AM to 10 PM) Avg. dB(A)		Night Time (10 PM to 6 AM) Avg. dB(A)		6 AM)	for Industri CPCB No (Regulation (Amendmen notified vid Dt. 22	mbient standard ial Area as per ise Pollution n and Control) nt) Rules , 2000 le S.O. 1046(E) 2.11.2020 dB(A) Leq	
								Day Time	Night Time
	LOCATION	MAX	MIN	AVG. dB(A) Leq	MAX	MIN	AVERAGE dB(A) Leq	Industrial Area	Industrial Area
co	RE ZONE								
1.	Tasra (Near Mine Site)	73.76	69.86	72.23	63.64	59.80	62.13		
2.	Weigh Bridge	70.84	68.95	70.00	60.26	56.89	58.89	75	70
BU	FFER ZONE							Residential Area	Residential Area
1.	KD Colony Rohrabandh	49.90	43.76	47.84	39.30	36.92	38.27		
2.	Near BIT Main Gate.	52.53	47.72	50.76	42.98	40.15	41.79	55	45
3.	GM OFFICE, Chasnala	47.68	42.53	45.83	40.33	38.65	39.57		45
4.	NEAR ARYA SAMAJ	50.94	48.49	49.89	40.16	38.60	39.45		

Sr. Chemist Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri



### ITI R&D SERV CES Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad

#### Testing Laboratory

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AN ISO 9001:2008 and OHSAS 18001:2007 Certified Compar

Plot No. - I-B-17 (P)

Jharkhand - 828107 Phone: 0326-2952377

Mobile: 09471358492

09431512608

#### TEST REPORT OF DRINKING WATER FOR THE MONTH OF AUGUST 2023

Ref. No. & Date	NAME AND	ADDRESS OF THE CLIENT			
ARDS/23-24/976 Dt. 25.08.2023	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD.				
CHASNALLA – 828135, DIST DHANBA					
P.O. NO. & Date	CD/CC/WO/2023-24/10 Dated- 25.05.2023				
Season	MONSOON				
Location of Sample	KD COLONY RO	OHARABAND (BUFFER ZON	IE)		
Sample Description	G	ROUND WATER			
		Analysis Started on	18.08.2023		
Date of Sample Collection	17.08.2023	Analysis completed on	24.08.2023		
Test Procedure	IS:3025				

	Test Procedure	15:3025					
	TEST	RESULT					
SI.	Parameters	Value	IS: 1050	0: 2012			
No.			Accepted Limit	Permissible Limit			
1.	Colour Hazen units	2	5	15			
2.	Odour	Agreeable	Agreeable	Agreeable			
3.	Taste	Agreeable	Agreeable	Agreeable			
4.	Turbidity NTU Max	NIL	- 1	5			
5.	Total Dissolved Solids mg/l, Max	645	500	2000			
6.	pH Value	7.5	6.5 to 8.5	6.5 to 8.5			
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	336	200	600			
8.	Calcium (as Ca) mg/l, Max	99.2	75	200			
9.	Magnesium (as Mg)mg/l, Max	21.1	30	100			
10.	Copper (as Cu) mg/l, Max	0.003	0.05	1.5			
11.	Iron (as Fe) mg/l Max	0.04	0.3	NR			
12.	Manganese (as Mn) mg/l, Max	<0.001	0.1	0.3			
13.	Chlorides (as CI) mg/l, Max	58	250	1000			
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	61.5	200	400			
15.	Nitrate mg/l, (as NO <sub>3)</sub>	8.8	45	NR			
16.	Fluoride (as F) mg/l	0.78	1.0	1.5			
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max		0.001	0.002			
18.	Mercury (as Hg)mg/l, Max	-	0.001	NR			
19.	Cadmium (as Cd) mg/l, Max	741	0.01	NR			
20.	Selenium (as Se mg/l, Max		0.01	NR			
21.	Arsenic (as As) mg/l, Max	< 0.001	0.01	0.05			
22.	Cyanide (as Cn) mg/l, Max	<0.001	0.05	NR			
23.	Lead (As Pb) mg/l Max	< 0.001	0.05	NR			
24.	Zinc (as Zn) mg/l Max	0.14	5.0	15			
25.	Arionic detergents (as MBAS), mg/l, Max		0.2	1.0			
26.	Chromium (as Cr+ <sup>6</sup> ) mg/l	0.006	0.05	NR			
27.	Mineral Oil mg/l, Max	-	0.01	NR			
28.	Residual, free chlorine mg/l, Min	NIL	0.2	1.0			

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS - 10500 : 2012

NR- No Relaxation

Sr. Chemist ( Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri



#### Testing Laboratory

Recognised by Jharkhand State Pollution Control Board
AN ISO 9001:2008 and OHSAS 18001:2007 Certified Compar

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Phone : 0326-2952377 Mobile : 09471358492

09431512608

TEST REPORT OF DRINKING WATER FOR THE MONTH OF AUGUST 2023

TEST REPORT OF DR	INKING WATER FOR THE		3		
Ref. No. & Date		ADDRESS OF THE CLIENT			
ARDS/23-24/977	TASRA COAL MINING	G PROJECT, COLLIERIES	DIVISION,		
Dt. 25.08.2023	STEEL AUTHORITY OF INDIA LTD.				
		- 828135, DIST DHANB			
P.O. NO. & Date	CD/CC/WO/2023-24/10 Dated- 25.05.2023				
Season	MONSOON				
Location of Sample	DUBEY CO	LONY TASRA (CORE ZONE)			
Sample Description		Ground Water			
		Analysis Started on	18.08.2023		
Date of Sample Collection	17.08.2023	Analysis completed on	24.08.2023		
Test Procedure		IS:3025			

	TEST RESULT					
SI.	Parameters	Value	IS: 1050	0: 2012		
No.			Accepted Limit	Permissible Limit		
1.	Colour Hazen units	1	5	15		
2.	Odour	Agreeable	Agreeable	Agreeable		
3.	Taste	Agreeable	Agreeable	Agreeable		
4.	Turbidity NTU Max	NIL	1	5		
5.	Total Dissolved Solids mg/l, Max	870	500	2000		
6.	pH Value	6.9	6.5 to 8.5	6.5 to 8.5		
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	484	200	600		
8.	Calcium (as Ca) mg/l, Max	147.2	75	200		
9.	Magnesium (as Mg)mg/l, Max	27.8	30	100		
10.	Copper (as Cu) mg/l, Max	0.002	0.05	1.5		
11.	Iron (as Fe) mg/l Max	0.14	0.3	NR		
12.	Manganese (as Mn) mg/l, Max	< 0.001	0.1	0.3		
13.	Chlorides (as CI) mg/l, Max	104	250	1000		
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	68.8	200	400		
15.	Nitrate mg/l, (as NO <sub>3)</sub>	8.9	45	NR		
16.	Fluoride (as F) mg/l	0.88	1.0	1.5		
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	(4)	0.001	0.002		
18.	Mercury (as Hg)mg/l, Max	-	0.001	NR		
19.	Cadmium (as Cd) mg/l, Max	) <b>.</b> €.?	0.01	NR		
20.	Selenium (as Se mg/l, Max		0.01	NR		
21.	Arsenic (as As) mg/l, Max	< 0.001	0.01	0.05		
22.	Cyanide (as Cn) mg/l, Max	< 0.001	0.05	NR		
23.	Lead (As Pb) mg/l Max	0.007	0.05	NR		
24.	Zinc (as Zn) mg/l Max	0.012	5.0	15		
25.	Arionic detergents (as MBAS), mg/l, Max		0.2	1.0		
26.	Chromium (as Cr+ <sup>6</sup> ) mg/l	0.009	0.05	NR		
27.	Mineral Oil mg/l, Max		0.01	NR		
28.	Residual, free chlorine mg/l, Min	NIL	0.2	1.0		

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water

Standard IS – 10500 : 2012 NR- No Relaxation

Sr. Chemist ( Aditi R&D Services Technical Manager Aditi R&D Services, Sindri



### ADITI R&D SERVICES Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad

#### **Testing Laboratory**

Recognised by Jharkhand State Pollution Control Board

AN ISO 9001:2008 and OHSAS 18001:2007 Certified Compan

Plot No. - I-B-17 (P)

Jharkhand - 828107 Phone: 0326-2952377 Mobile: 09471358492

09431512608

TEST REPORT OF DRINKING WATER FOR THE MONTH OF AUGUST 2023

Ref. No. & Date	NAME AND	ADDRESS OF THE CLIENT			
ARDS/23-24/978 Dt. 25.08.2023	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD.				
	CHASNALLA – 828135, DIST DHANBAD				
P.O. NO. & Date	CD/CC/WO/2023-24/10 Dated- 25.05.2023				
Season	MONSOON				
Location of Sample	ARYA SAM	AJ, SINDRI (BUFFER ZONE)			
Sample Description		Ground Water			
		Analysis Started on	18.08.2023		
Date of Sample Collection	17.08.2023	Analysis completed on	24.08.2023		
Test Procedure	IS:3025				

		RESULT			
SI.	Parameters	Value	IS: 10500: 2012		
No.			Accepted Limit	Permissible Limit	
1.	Colour Hazen units	1	5	15	
2.	Odour	Agreeable	Agreeable	Agreeable	
3.	Taste	Agreeable	Agreeable	Agreeable	
4.	Turbidity NTU Max	1	1	5	
5.	Total Dissolved Solids mg/l, Max	856	500	2000	
6.	pH Value	7.0	6.5 to 8.5	6.5 to 8.5	
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	532	200	600	
8.	Calcium (as Ca) mg/l, Max	153.6	75	200	
9.	Magnesium (as Mg)mg/l, Max	35.5	30	100	
10.	Copper (as Cu) mg/l, Max	0.003	0.05	1.5	
11.	Iron (as Fe) mg/l Max	0.12	0.3	NR	
12.	Manganese (as Mn) mg/l, Max	0.01	0.1	• 0.3	
13.	Chlorides (as CI) mg/l, Max	83.7	250	1000	
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	70	200	400	
15.	Nitrate mg/l, (as NO <sub>3)</sub>	4.8	45	NR	
16.	Fluoride (as F) mg/l	0.79	, 1.0	1.5	
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max		0.001	0.002	
18.	Mercury (as Hg)mg/l, Max		0.001	NR	
19.	Cadmium (as Cd) mg/l, Max		0.01	NR	
20.	Selenium (as Se mg/l, Max		0.01	NR	
21.	Arsenic (as As) mg/l, Max	< 0.001	0.01	0.05	
22.	Cyanide (as Cn) mg/l, Max	<0.001	0.05	NR	
23.	Lead (As Pb) mg/l Max	0.015	0.05	NR	
24.	Zinc (as Zn) mg/l Max	0.04	5.0	15	
25.	Arionic detergents (as MBAS), mg/l, Max		0.2	1.0	
26.	Chromium (as Cr+5) mg/l	0.018	0.05	NR	
27.	Mineral Oil mg/l, Max	*	0.01	NR	
28.	Residual, free chlorine mg/l, Min	NIL	0.2	1.0	

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS - 10500: 2012

NR- No Relaxation 8.200

Sr. Chemist ( Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri



# ADITI R&D SERVICES Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad

#### **Testing Laboratory**

Recognised by Jharkhand State Pollution Control Board

AN ISO 9001:2008 and OHSAS 18001:2007 Certified Company

Plot No. - I-B-17 (P) Jharkhand - 828107

Phone: 0326-2952377 Mobile: 09471358492

09431512608

TEST REPORT OF SURFACE WATER FOR THE MONTH OF AUGUST 2023

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT				
ARDS/23-24/979	TASRA COAL MINING PROJECT, COLLIERIES DIVISION,				
Dt. 25.08.2023	STEEL AUTHORITY OF INDIA LTD.				
CHASNALLA – 828135, DIST DHANBAD					
P.O. NO. & Date	CD/CC/WO/2023-24/10 Dated- 25.05.2023				
Season	PRE MONSOON				
Location of S  DAMODAR RIVER DOWNSTREAM C		Analysis Started on	18.08.2023		
Date & Time Sample Collection	17.08.2023/ 02:40 PM	Analysis completed on	24.08.2023		
Test Procedure		IS:3025			
	TEST RESULT				

	TEST RE	SULT	
SI. No.	Parameters	Value	(IS :2296) Surface Water Class"C" Tolerance Limit
1.	Colour Hazen units	2	300
2.	Dissolved Oxygen, mg/l	4.8	4
3.	B.O.D. (3 days at 27°C)	1.8	3
4.	Total Dissolved Solids mg/l, Max	245	1500
5.	pH Value	7.4	6.5 - 8.5
6.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	132	NS
7.	Calcium (as Ca) mg/l, Max	28.8	NS
8.	Magnesium (as Mg)mg/l, Max	14.4	NS
9.	Copper (as Cu) mg/l, Max	0.003	1.5
10.	Iron (as Fe) mg/l Max	0.45	50
11.	Manganese (as Mn) mg/l, Max	<0.001	NS
12.	Chlorides (as CI) mg/l, Max	19	600
13.	Sulphate (as SO <sub>4</sub> ) mg/l Max	41.5	400
14.	Nitrate mg/l, (as NO <sub>3)</sub>	10.1	50
15.	Fluoride (as F) mg/l	0.72	1.5
16.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	<0.001	0.005
17.	Cadmium (as Cd) mg/l, Max	<0.001	0.01
18.	Oil and grease, mg/l	BDL	0.1
19.	Arsenic (as As) mg/l, Max	<0.001	0.2
20.	Sodium (as Na) mg/l, Max	4.8	NS
21.	Lead (As Pb) mg/I Max	0.002	0.1
22.	Zinc (as Zn) mg/l Max	0.18	15
23.	Potassium as K)	1.4	NS
24.	Hexavalent Chromium (as Cr6 <sup>+</sup> ) mg/l, Max	< 0.001	0.05
25.	C.O.D., mg/l	47	-
26.	Total Suspended Solids , mg/l	25	-

Remarks: All the parameters of samples tested are within the permissible limit of General standard. BDL - Below Detection Limit

NS - Not Specified

8.2.09

Sr. Chemist Aditi R&D Services DOMGARH

Technical Manager Aditi R&D Services, Sindri



### ADITI R&D SERV CES Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad

#### Testing Laboratory

Recognised by Jharkhand State Pollution Control Board

AN ISO 9001:2008 and OHSAS 18001:2007 Certified Company

Plot No. - I-B-17 (P)

Jharkhand - 828107

Phone: 0326-2952377 Mobile : 09471358492

09431512608

TEST REPORT OF SURFACE WATER FOR THE MONTH OF AUGUST 2023

Ref. No. & Date	NAME AND AD	DRESS OF THE CLIENT		
ARDS/23-24/980 TASRA COAL MINING PROJECT, COLLIERIES DIVISIO				
Dt. 25.08.2023 STEEL AUTHORITY OF INDIA LTD.				
CHASNALLA – 828135, DIST DHANBAD				
P.O. NO. & Date	CD/CC/WO/2023-24/10 Dated- 25.05.2023			
Season	PRE MONSOON			
Location of DAMODAR RIVER UPSTREAM OF		Analysis Started on	18.08.2023	
Date & Time Sample Collection	17.08.2023/ 02:40PM	Analysis completed on	24.08.2023	
Test Procedure		IS:3025		

SI. No.	Parameters	Value	(IS :2296) Surface Water Class "C" Tolerance Limit
1.	Colour Hazen units	1	300
2.	Dissolved Oxygen, mg/l	4.6	4
3.	B.O.D. (3 days at 27°C)	2.1	3
4.	Total Dissolved Solids mg/l, Max	214	1500
5.	pH Value	7.6	6.5 - 8.5
6.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	136	NS
7.	Calcium (as Ca) mg/l, Max	30.4	NS
8.	Magnesium (as Mg)mg/l, Max	14.4	NS
9.	Copper (as Cu) mg/l, Max	0.003	1.5
10.	Iron (as Fe) mg/l Max	0.3	50
11.	Manganese (as Mn) mg/l, Max	<0.001	•NS
12.	Chlorides (as CI) mg/l, Max	20.5	600
13.	Sulphate (as SO <sub>4</sub> ) mg/l Max	48.6	400
14.	Nitrate mg/l, (as NO <sub>3)</sub>	9.4	50
15.	Fluoride (as F) mg/l	0.70	1.5
16.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	<0.001	0.005
17.	Cadmium (as Cd) mg/l, Max	<0.001	0.01
18.	Oil and grease, mg/l	BDL	0.1
19.	Arsenic (as As) mg/l, Max	<0.001	0.2
20.	Sodium (as Na) mg/l, Max	7.5	NS
21.	Lead (As Pb) mg/l Max	< 0.001	0.1
22.	Zinc (as Zn) mg/l Max	0.16	15
23.	Potassium as K)	1.2	NS .
24.	Hexavalent Chromium (as Cr6 <sup>+</sup> ) mg/l, Max	< 0.001	0.05
25.	C.O.D., mg/l	39	-
26.	Total Suspended Solids , mg/l	23	

Remarks: All the parameters of samples tested are within the permissible limit of General standard. **BDL - Below Detection Limit** 

NS - Not Specified

Sr. Chemist Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri

Website: aditirndservices.com Email ID: sindriaditi@gmail.com,



# ADITI R&D SERVICES Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad

Testing Laboratory

Recognised by Jharkhand State Pollution Control Board Mobile: 09471358492

AN ISO 9001:2008 and OHSAS 18001:2007 Certified Compan

Plot No. - I-B-17 (P) Jharkhand - 828107

Phone: 0326-2952377

09431512608

#### TEST REPORT OF EFFLUENT WATER FOR THE MONTH OF AUGUST 2023

	Ref. No. & Date	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD					
	ARDS/23-24/981 Dt. 25.08.2023						
	P.O. NO. & DATE	CD/CC	C/WO/20	23-24/1	0 DATED- 25.05	5.2023	
	SEASON			MONS	SOON		
	Sample Description		Ef	fluent D	ischarged		
	Location of Sample	Pond Water Ta (CORE ZO		Anal	ysis Started on	18.08.2023	
C	Pate & Time Sample Collection	17.08.20 01:40 P	RECEIVED IN	Analys	is completed on	24.08.2023	
	Test Procedure			IS:3	025		
		TEST RES	ULT			PAGE NA	
SI. No.	Parameters	Unit	Value	е	Effluent V IS: 249		
1.	pH value	-	6.9		5.5 to 9	.0	
2.	Colour,	Hazen units,	(<5)		5		
3.	Odour*		Agreea	ble	Annexur	ure-1	
4.	Conductivity, µS/cm	μS/cm	650		NS	NS	
5.	Turbidity (NTU)	NTU	7.3		NS NS		
6.	Total Dissolved Solids mg/l	mg/l	429		2100		
7.	Total Suspended Solids mg/l, max,	mg/l	29		100		
8.	Dissolved Oxygen (DO)	mg/l	5.4		NS		
9.	Oil and grease, mg/l	mg/l	0.4	4 10		700	
10. Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH),		mg/l max	•		1.0		
11.	B.O.D.	mg/l	11.7	-	30	y .	
12.	C.O.D.	mg/l			250		

NS - Not Specified

8.2004 Sr. Chemist Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri



# ADITI R&D SERVICES P.O.- Domgarh, Dist.- Dhanbad

Testing Laboratory

Recognised by Jharkhand State Pollution Control Board

AN ISO 9001:2008 and OHSAS 18001:2007 Certified Company

Plot No. - I-B-17 (P) Sindri, Industrial Area,

Jharkhand - 828107

Phone: 0326-2952377

Mobile: 09471358492

09431512608

#### TEST REPORT OF EFFLUENT WATER FOR THE MONTH OF AUGUST 2023

	Ref. No. & Date	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD					
	ARDS/23-24/982 Dt. 25.08.2023						
	P.O. NO. & DATE		A CONTRACTOR OF THE PARTY OF TH		0 DATED- 25.0		
	SEASON			MONS	SOON		
	Sample Description			MINE V	VATER		
	Location of Sample	TASRA EXISTING MINE PIT, TASRA OCP (CORE ZONE)		Analysis Started on		18.08.2023	
Date & Time Sample Collection		17.08.2023 02:00 PM		Analys	is completed on	24.08.2023	
	Test Procedure			IS:3	025		
		TEST RES	ULT				
SI. No.	Parameters	Unit	Value	9	Effluent V IS: 249		
1.	pH value	-	7.2 5.5 to 9.0		.0		
2.	Colour,	Hazen units,	(<5)		5		
3.	Odour*		Agreeable		Annexure-1		
4.	Conductivity, µS/cm	μS/cm	870		NS		
5.	Turbidity (NTU)	NTU	2.8 NS				
6.	Total Dissolved Solids mg/l	mg/l	560 2100				
7.	Total Suspended Solids mg/l, max,	mg/l	24		100		
8.	Dissolved Oxygen (DO)	mg/l	6.1		NS		
9.	Oil and grease, mg/l	mg/l	BDL		10		
10.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH),	mg/l max			1.0		
11.	B.O.D.	mg/l	10.8		30		
12.	C.O.D.	mg/I	78		250		

NS - Not Specified

8.209 Sr. Chemist Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri



Testing Laboratory NABL ACCREDITED

(A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com

Website: aditirndservices.com Phone: 0326-2952377 (O)

Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/23-24/1529

Date: 05/12/2023

#### TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry

: TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order Ref. NO .:

: CD/CC/WO/2023-24/10 Dated- 25.05.2023

Date of Sample Collection : 27/11/2023 - 28/11/2023

Date of Testing

: 29/11/2023 - 30/11/2023

Test Procedure

: As per IS - 5182

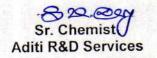
Sampling Location

: Near Check Post Tasra Project.

(Core Zone)

#### TEST RESULTS

	Avg. Ambient Average Relative Humidity (%)		Sample 1	Sample 2	NAAQ - CPCB	
	29	49	27/11/2023	28/11/2023	STANDARD	
SI No.	Particulars		Value	Value		
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>		85.62	81.31	100 µg/m³	
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>		50.37	46.78	60 µg/m³	
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		35.82	34.28	80 µg/m³	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>		22.48	20.80	80 µg/m³	
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		15.18	16.85	400 μg/m³	
6.	CO, mg/m <sup>3</sup>		0.89	0.73	4 mg/m <sup>3</sup>	
7.	Pb, µg/m³		BDL	0.002	1 μg/m³	
8.	As, ng/m <sup>3</sup>		BDL	BDL	6ng/m³	
9.	Ni, ng/m³		BDL	BDL		
10.	Benzene, µg/m³		BDL	BDL	20ng/m³	
11.	Benzoapyreneng/m <sup>3</sup>		BDL	BDL	5 μg/m³	
12.	Ozone, µg/m³		15.36	11.62	1ng/m³ 180 µg/m³	





Technical Manager Aditi R&D Services, Sindri

#### Statements:

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- 2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
- 3. This particular test report cannot be reproduced except in full without prior permission of Quality Manager of the laboratory.



## Testing Laboratory NABL ACCREDITED

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ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified

Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad

Jharkhand - 828107

Plot No. - I-B-17 (P)

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (0)

Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/23-24/1530

Date: 05/12/2023

#### TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry

: TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order Ref. NO.:

:CD/CC/WO/2023-24/10 Dated- 25.05.2023

Date of Sample Collection

: 27/11/2023 – 28/11/2023

Date of Testing

: 29/11/2023 - 30/11/2023

Test Procedure

: As per IS-5182

Sampling Location

: Near Arya Samaj, Sindri

(Core Zone)

#### TEST RESULTS

	Avg. Ambient Temperature	Average Relative Humidity (%)	Sample 1	Sample 2	NAAQ - CPCB	
	29	29 49 27/11/20	27/11/2023	28/11/2023	STANDARD	
SI No.	Particulars		Value	Value		
1.	Particulate Matt	er (PM <sub>10</sub> ), µg/m <sup>3</sup>	82.94	80.91	100 µg/m³	
2.	Particulate Matt	er (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	47.76	45.55	60 μg/m <sup>3</sup>	
3.	SO <sub>2</sub> , µg/m <sup>3</sup>	New York Control of the Control of t	26.90	25.22	80 µg/m³	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>	11/1	22.87	23.52	80 µg/m³	
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		14.86	13.36	400 µg/m³	
6.	CO, mg/m <sup>3</sup>	11/10	0.82	0.62	4 mg/m³	
7.	Pb, μg/m <sup>3</sup>	NU	0.001	BDL	1 µg/m³	
8.	As, ng/m3		BDL	BDL	6ng/m3	
9.	Ni, ng/m3	THE PARTY OF THE	BDL	BDL	20ng/m3	
10.	Benzene, µg/m3		BDL	BDL	5 μg/m3	
11.	Benzoapyrenen	g/m3	BDL	BDL	1ng/m3	
12.	Ozone, µg/m3		13.76	12.46	180 μg/m3	

Sr. Chemist Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri

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Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

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Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/23-24/1531 Date: 05/12/2023

#### **TEST REPORT OF AMBIENT AIR QUALITY**

Name of the industry

: TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order Ref. NO .:

:CD/CC/WO/2023-24/10 Dated- 25.05.2023

Date of Sample Collection : 27/11/2023 - 28/11/2023

**Date of Testing** 

: 29/11/2023 - 30/11/2023

**Test Procedure** 

: As per IS-5182

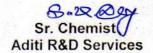
Sampling Location

: K.D. Colony Rorabandh

(Buffer Zone)

#### TEST RESULTS

	Avg. Ambient Average Relative Humidity (%)		Sample 1	Sample 2	NAAQ - CPCB	
	29	49	27/11/2023	28/11/2023	STANDARD	
SI No.	Particulars		Value	Value		
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>		68.97	66.02	100 µg/m³	
2.	Particulate Matt	er (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	40.38	37.60	60 μg/m <sup>3</sup>	
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		20.71	19.58	80 µg/m³	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>	()(a) (ii)	20.80	18.90	80 µg/m³	
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		16.28	14.80	400 µg/m³	
6.	CO, mg/m <sup>3</sup>	MA	0.95	0.64	4 mg/m <sup>3</sup>	
7.	Pb, µg/m³	10	BDL	BDL	1 µg/m³	
8.	As, ng/m3		BDL	BDL	6ng/m3	
9.	Ni, ng/m3	Her with the re	BDL	BDL	20ng/m3	
10.	Benzene, µg/m3		BDL	BDL	5 μg/m3	
11.	Benzoapyrenen	g/m3	BDL	BDL	1ng/m3	
12.	Ozone, µg/m3		15.82	14.52	180 μg/m3	





Technical Manager Aditi R&D Services, Sindri

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Testing Laboratory NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified

ARDS/23-24/1532

Plot No. - I-B-17 (P) Sindri, Industrial Area,

P.O.- Domgarh, Dist.- Dhanbad

Jharkhand - 828107

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Mobile: 09471358492, 09431512608

Date: 05/12/2023

#### TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry

: TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order Ref. NO.:

:CD/CC/WO/2023-24/10 Dated- 25.05.2023

Date of Sample Collection : 27/11/2023 - 28/11/2023

**Date of Testing** 

: 29/11/2023 - 30/11/2023

**Test Procedure** 

: As per IS-5182

Sampling Location

: G.M. OFFICE CHASNALLA

#### TEST RESULTS

	Avg. Ambient Temperature	Average Relative Humidity (%)	Sample 1	Sample 2	NAAQ - CPCB
	29	49	27/11/2023	28/11/2023	STANDARD
SI No.	Particulars		Value	Value	
1.	Particulate Matt	er (PM <sub>10</sub> ), µg/m <sup>3</sup>	69.22	65.43	100 µg/m³
2.	Particulate Matt	er (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	38.54	36.25	60 µg/m³
3.	SO <sub>2</sub> , µg/m <sup>3</sup>	Village Bridge	21.15	20.18	80 µg/m³
4.	NO <sub>2</sub> , µg/m <sup>3</sup>		20.15	19.90	80 µg/m³
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		17.25	14.52	400 µg/m³
6.	CO, mg/m <sup>3</sup>		0.87	0.60	4 mg/m <sup>3</sup>
7.	Pb, μg/m³	1///	BDL	BDL	1 μg/m³
8.	As, ng/m3	V V(V)	BDL	BDL	6ng/m3
9.	Ni, ng/m3		BDL	BDL	20ng/m3
10.	Benzene, µg/m3		BDL	BDL	
11.	Benzoapyreneng	g/m3	BDL	BDL	5 μg/m3
12.	Ozone, µg/m3		11.95	10.28	1ng/m3 180 μg/m3

8,200 Sr. Chemis Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri

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Testing Laboratory
NABL ACCREDITED

(A Constituent Board of Quality Council of India)
ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirndservices.com

Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608

### TEST REPORT OF NOISE (AMBIENT) LEVEL MONITORING

		lo. & Da			VI / 10/2	NAME	AND ADDRE	SS OF THE CL	IENT
Al	Date of Monitoring  27/11/2023 TO 28/11/2023				CI	OAL MII STEEL HASNAL	NING PROJ AUTHORIT	ECT, COLLIE TY OF INDIA 55, DIST DH	RIES DIVISIO
10/					vg. Amb emperat (°C)	ient	Average Humidity (%)	Weather Condition	Status of the
VV	Work Order CD/CC/WO/2023-24/10 Dated- 25.05.2023		4/10	29	CA	49	Clear	Running	
-			1	MON	ITORING	RESU	LTS		
SI. No	Place of Monitoring	(	Day Ti 6 AM to 1 Avg. de	0 PM)		Night (10 PM to Avg. d	o 6 AM)	Noise level (Ambient stand for Industrial Area as p CPCB Noise Pollution (Regulation and Contro (Amendment) Rules , 20 notified vide S.O. 1046(I Dt. 22.11.2020 Limit in dB(A) Leq	
	LOCATION	MAX						Day Time	Night Time
20	RE ZONE	MAX	MIN	AVG. dB(A) Leq	MAX	MIN	AVERAGE dB(A) Leq	Industrial Area	Industrial Area
	IL ZONE						//	1	
1.	Tasra (Near Mine Site)	72.66	69.22	71.27	64.82	57.60	62.56	1	
2.	Weigh Bridge	71.80	67.90	70.27	61.28	57.25	59.72	75	70
UF	FER ZONE		ML			The same of	21/	Residential	Residential
	KD Colony Rohrabandh	47.82	42.70	45.97	39.85	35.80	38.28	Area	Area
	Near BIT Main Gate.	51.60	45.70	49.58	43.18	39.70	41.78	55	
	GM OFFICE, Chasnala	46.62	44.50	45.69	41.35	37.18	39.75		45
1	NEAR ARYA	52.80	42.15	50.15	42.90	38.18	41.15		

Sr. Chemist Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri

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#### **Testing Laboratory** NABL ACCREDITED

(A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified Mobile: 09471358492, 09431512608

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P.O.- Domgarh, Dist.- Dhanbad

Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditimdservices.com Phone: 0326-2952377 (O)

#### TEST REPORT OF DRINKING WATER FOR THE MONTH OF NOVEMBER 2023

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT				
ARDS/23-24/1534 Dt. 05/12/2023	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD				
P.O. NO. & Date	CD/CC/WO/2023-24/10 Dated- 25.05.2023				
Season	POST MONSOON				
Location of Sample	KD COLONY RO	HARABAND (BUFFER ZONE)			
Sample Description	GF	ROUND WATER			
		Analysis Started on 29/11/2023			
Date of Sample Collection	28/11/2023 / 12:25 PM	Analysis completed on 04/12/2023			
Test Procedure	all Ch.	IS:3025			
E. Control	TEST RESULT				

11000	l'est Procedure	RESULT	15.3025		
CL	Parameters	Value	IS: 10500: 2012		
SI. No.	Parameters	Value	Accepted Limit	Permissible Limit	
1.	Colour Hazen units	1	5	15	
2.	Odour	Agreeable	Agreeable	Agreeable	
3.	Taste	Agreeable	Agreeable	Agreeable	
4.	Turbidity NTU Max	NIL	1	5	
5.	Total Dissolved Solids mg/l, Max	656	500	2000	
6.	pH Value	6.9	6.5 to 8.5	6.5 to 8.5	
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	361	200	600	
8.	Calcium (as Ca) mg/l, Max	104.2	75	200	
9.	Magnesium (as Mg)mg/l, Max	24.2	30	100	
10.	Copper (as Cu) mg/l, Max	0.006	0.05	1.5	
11.	Iron (as Fe) mg/l Max	0.2	0.3	NR	
12.	Manganese (as Mn) mg/l, Max	< 0.001	0.1	. 0.3	
13.	Chlorides (as Cl) mg/l, Max	63.2	250	1000	
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	80.8	200	400	
15.	Nitrate mg/l, (as NO <sub>3)</sub>	7.4	45	NR	
16.	Fluoride (as F) mg/l	0.62	1.0	1.5	
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	. 1	0.001	0.002	
18.	Mercury (as Hg)mg/l, Max	Selle of the selle	0.001	NR	
19.	Cadmium (as Cd) mg/l, Max	- 0	0.01	NR	
20.	Selenium (as Se mg/l, Max		0.01	NR	
21.	Arsenic (as As) mg/l, Max	< 0.001	0.01	0.05	
22.	Cyanide (as Cn) mg/l, Max	< 0.001	0.05	NR	
23.	Lead (As Pb) mg/l Max	< 0.001	0.05	NR	
24.	Zinc (as Zn) mg/l Max	0.24	5.0	15	
25.	Arionic detergents (as MBAS), mg/l, Max		0.2	1.0	
26.	Chromium (as Cr+6) mg/l	0.009	0.05	NR	
27.	Mineral Oil mg/l, Max	745 - O S.C.	0.01	NR *	
28.	Residual, free chlorine mg/l, Min	NIL	0.2	1.0	

Residual, free chlorine mg/l, Min Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS -10500: 2012, NR- No Relaxation

soir Sr. Chemist Aditi R&D Services

elitor

Technical Manager Aditi R&D Services, Sindri

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Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608

TECT DEDOOT OF DOIN	CINC MATER FOR THE MONTH OF NOVEMBER 2002
TEGT REPORT OF DIVIN	KING WATER FOR THE MONTH OF NOVEMBER 2023

	Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT					
	ARDS/23-24/1535	TASRA COAL MINING PROJECT, COLLIERIES DIVISION,					
	Dt. 05/12/2023	STEEL AUTHORITY OF INDIA LTD.					
	DO NO. 8 D.	CHASNALLA – 828135, DIST DHANBAD					
_	P.O. NO. & Date Season			-24/10 Dated- 25.05.20	23		
	Location of Sample			T MONSOON			
	Sample Description			Y TASRA (CORE ZON	E)		
74	Sample Description		Gro	ound Water			
- D	ato of Commis Collegeion	07/44/0000	04.05.014	Analysis Started or			
D	ate of Sample Collection	27/11/2023 /	01:05 PM	Analysis completed	on <b>04/12/2023</b>		
	Test Procedure			IS:3025	Water Care		
		TEST	RESULT				
SI.	Parameters	X	Value	IS: 105	500: 2012		
No.		THE RESERVE OF THE PARTY OF THE	5/1/	Accepted Limit	Permissible Limit		
1.	Colour Hazen uni	ts	1	5	15		
2.	Odour		Agreeable	Agreeable	Agreeable		
3.	Taste		Agreeable	Agreeable	Agreeable		
4.	Turbidity NTU Ma	IX .	1	1	5		
5.	Total Dissolved Solids m	g/l, Max	916	500	2000		
6.	pH Value		7.1	6.5 to 8.5	6.5 to 8.5		
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max		470.4	200	600		
8.	Calcium (as Ca) mg/l	Max	149.5	75	200		
9.	Magnesium (as Mg)mg	/I, Max	23.8	30	100		
10.	Copper (as Cu) mg/l,	Max	0.004	0.05	1.5		
11.	Iron (as Fe) mg/l M		0.15	0.3	NR		
12.	Manganese (as Mn) mg		< 0.001	0.1	0.3		
13.	Chlorides (as Cl) mg/l	, Max	126.3	250 .	1000		
14.	Sulphate (as SO <sub>4</sub> ) mg/		92.6	200	400		
15.	Nitrate mg/l, (as N	The state of the s	7.7	45	NR		
16.	Fluoride (as F) mg		0.70	1.0	1.5		
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> C		- /	0.001	0.002		
18.	Mercury (as Hg)mg/l		-//	0.001	NR		
19.	Cadmium (as Cd) mg/		A A	0.01	NR		
20.	Selenium (as Se mg/l, Max			0.01	NR		
21.	Arsenic (as As) mg/l, Max		< 0.001	0.01	0.05		
22.	Cyanide (as Cn) mg/l,		< 0.001	0.05	NR		
23.	Lead (As Pb) mg/l N		0.002	0.05	NR		
24.	Zinc (as Zn) mg/l M		0.28	5.0	15		
25.	Arionic detergents (as MBAS			0.2	1.0		
26.	Chromium (as Cr+6) 1		0.001	0.05	NR		
27.	Mineral Oil mg/l, M	ax		0.01	NR		

Residual, free chlorine mg/l, Min Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS -10500: 2012, NR- No Relaxation

Sr. Chemist

Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri

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Email ID: sindriaditi@gmail.com Website: aditimdservices.com Phone: 0326-2952377 (0)

Mobile: 09471358492, 09431512608

#### TEST REPORT OF DRINKING WATER FOR THE MONTH OF NOVEMBER 2023

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT					
ARDS/23-24/1536 Dt. 05/12/2023	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD					
P.O. NO. & Date	CD/CC/WO/2023-24/10 Dated- 25.05.2023					
Season	POST MONSOON					
Location of Sample	ARYA SAMAJ	, SINDRI (BUFFER ZONE)				
Sample Description		Fround Water	23 6, 15 -			
Charles all the control of		Analysis Started on	29/11/2023			
Date of Sample Collection	27/11/2023 / 01:08 PM	Analysis completed on	04/12/2023			
Test Procedure	2.11.362	IS:3025				

	TEST	RESULT		
SI.	Parameters	Value	IS: 105	00: 2012
No.			Accepted Limit	Permissible Limit
1.	Colour Hazen units	1	5	15
2.	Odour	Agreeable	Agreeable	Agreeable
3.	Taste	Agreeable	Agreeable	Agreeable
4.	Turbidity NTU Max	NIL	1	5
5.	Total Dissolved Solids mg/l, Max	930	500	2000
6.	pH Value	7.2	6.5 to 8.5	6.5 to 8.5
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	546	200	600
8.	Calcium (as Ca) mg/l, Max	166.3	75	200
9.	Magnesium (as Mg)mg/l, Max	31.25	30	100
10.	Copper (as Cu) mg/l, Max	0.002	0.05	1.5
11.	Iron (as Fe) mg/l Max	0.09	0.3	NR
12.	Manganese (as Mn) mg/l, Max	0.02	0.1	0.3
13.	Chlorides (as CI) mg/l, Max	109.6	250	1000
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	74.6	200	400
15.	Nitrate mg/l, (as NO <sub>3)</sub>	3.2	45	NR
16.	Fluoride (as F) mg/l	0.68	1.0	1.5
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max		0.001	0.002
18.	Mercury (as Hg)mg/l, Max	1 1	0.001	NR
19.	Cadmium (as Cd) mg/l, Max	- 1	0.01	NR
20.	Selenium (as Se mg/l, Max	200	0.01	NR
21.	Arsenic (as As) mg/l, Max	<0.001	0.01	0.05
22.	Cyanide (as Cn) mg/l, Max	<0.001	0.05	NR
23.	Lead (As Pb) mg/l Max	0.004	0.05	NR
24.	Zinc (as Zn) mg/l Max	0.3	5.0	15
25.	Arionic detergents (as MBAS), mg/l, Max	NE LE	0.2	1.0
26.	Chromium (as Cr+ <sup>6</sup> ) mg/l	0.01	0.05	NR
27.	Mineral Oil mg/l, Max	West - Land	0.01	NR
28.	Residual, free chlorine mg/l, Min	NIL	0.2	1.0

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS – 10500 : 2012, NR- No Relaxation

Sr. Chemist
Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri

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Mobile: 09471358492, 09431512608

TEST REPORT	OF SURFAC	E WATER FO	OR THE MONT	H OF NO	VEMBER 2023

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT			
ARDS/23-24/1537 Dt. 05/12/2023	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD			
P.O. NO. & Date	CD/CC/WO/2023-24/10 Dated- 25.05.2023			
Season	POST MONSOON			
Location of Sample DAMODAR RIVER DOWNSTREAM OF MINE SITE (BUFFER ZONE)		Analysis Started on	29/11/2023	
Date & Time Sample Collection	28/11/2023/ 03:30 PM	Analysis completed on	04/12/2023	
Total Descriptions	STREET, STREET	10.0005	Contract Contract	

121	Test Procedure	IS:3025	
	TEST	RESULT	
SI. No.	Parameters	Value	(IS :2296) Surface Water Class"C" Tolerance Limit
1.	Colour Hazen units	1/	300
2.	Dissolved Oxygen, mg/l	6.2	4
3.	B.O.D. (3 days at 27°C)	0.8	3
4.	Total Dissolved Solids mg/l, Max	312	1500
5.	pH Value	• 7.7	6.5 - 8.5
6.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	168	NS
7.	Calcium (as Ca) mg/l, Max	42	NS
8.	Magnesium (as Mg)mg/l, Max	15	NS
9.	Copper (as Cu) mg/l, Max	0.002	1.5
10.	Iron (as Fe) mg/l Max	0.34	50
11.	Manganese (as Mn) mg/l, Max	<0.001	NS
12.	Chlorides (as CI) mg/l, Max	18.6	• 600
13.	Sulphate (as SO <sub>4</sub> ) mg/l Max	59.5	400
14.	Nitrate mg/l, (as NO <sub>3)</sub>	9.8	50
15.	Fluoride (as F) mg/l	0.68	1.5
16.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	<0.001	0.005
17.	Cadmium (as Cd) mg/l, Max	<0.001	0.01
18.	Oil and grease, mg/l	BDL	0.1
19.	Arsenic (as As) mg/l, Max	<0.001	0.2
20.	Sodium (as Na) mg/l, Max	5.2	NS
21.	Lead (As Pb) mg/l Max	0.004	0.1
22.	Zinc (as Zn) mg/l Max	0.028	15
23.	Potassium as K)	1.7	NS
24.	Hexavalent Chromium (as Cr6 <sup>+</sup> ) mg/l, Max	<0.001	0.05
25.	C.O.D., mg/l	82	
26.	Total Suspended Solids , mg/l	30	The state of the s

Remarks: All the parameters of samples tested are within the permissible limit of General standard. BDL-Below Detection Limit, NS – Not Specified

Sr. Chemist Aditi R&D Services DOMGARH DAMBAD

Technical Manager Aditi R&D Services, Sindri

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Mobile: 09471358492, 09431512608

#### TEST REPORT OF SURFACE WATER FOR THE MONTH OF NOVEMBER 2023

NAME AND ADDRESS OF THE CLIENT				
TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD				
CD/CC/WO/2023-24/10 Dated- 25.05.2023				
POST MONSOON				
	Analysis Started on	29/11/2023		
28/11/2023/ 03:20 PM	Analysis completed on	04/12/2023		
	IS:3025			
	TASRA COAL MINING F STEEL AUTH CHASNALLA – 8 CD/CC/WO/2023 POS Sample MINE SITE (BUFFER ZONE)	TASRA COAL MINING PROJECT, COLLIERIES DIV STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD CD/CC/WO/2023-24/10 Dated- 25.05.2023 POST MONSOON  Sample Analysis Started on MINE SITE (BUFFER ZONE) 28/11/2023/ 03:20 PM Analysis completed on		

	Test Hocedule	10.5020	
	TEST RE		
SI. No.	Parameters	Value	(IS :2296) Surface Water Class "C" Tolerance Limit
1.	Colour Hazen units	1/	300
2.	Dissolved Oxygen, mg/l	6.0	4
3.	B.O.D. (3 days at 27°C)	0.7	3
4.	Total Dissolved Solids mg/l, Max	306	1500
5.	pH Value	7.5	6.5 – 8.5
6.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	180.6	NS
7.	Calcium (as Ca) mg/l, Max	43.7	NS
8.	Magnesium (as Mg)mg/l, Max	17.2	NS
9.	Copper (as Cu) mg/l, Max	0.002	1.5
10.	Iron (as Fe) mg/l Max	0.29	50
11.	Manganese (as Mn) mg/l, Max	<0.001	. NS
12.	Chlorides (as CI) mg/l, Max	22.2	600
13.	Sulphate (as SO <sub>4</sub> ) mg/l Max	58.4	400
14.	Nitrate mg/l, (as NO <sub>3)</sub>	9.7	50
15.	Fluoride (as F) mg/l	0.66	1.5
16.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	<0.001	0.005
17.	Cadmium (as Cd) mg/l, Max	<0.001	0.01
18.	Oil and grease, mg/l	BDL	0.1
19.	Arsenic (as As) mg/l, Max	<0.001	0.2
20.	Sodium (as Na) mg/l, Max	6.2	NS
21.	Lead (As Pb) mg/l Max	<0.001	0.1
22.	Zinc (as Zn) mg/l Max	0.24	15
23.	Potassium as K)	1.4	NS
24.	Hexavalent Chromium (as Cr6 <sup>+</sup> ) mg/l, Max	<0.001	0.05
25.	C.O.D., mg/l	73	
26.	Total Suspended Solids , mg/l	27	/ · · · · · · · · · · · · · · · · · · ·

Remarks: All the parameters of samples tested are within the permissible limit of General standard. BDL -Below Detection Limit, NS - Not Specified

Arsr. Chemist Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri

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Email ID: sindriaditi@gmail.com
Website: aditirndservices.com

Phone: 0326-2952377 (O)

TEST REPORT OF FFFI UFNT WATER FOR THE MONTH MODE NOVEMBER 2023

	Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT					
	ARDS/23-24/1539 Dt. 05/12/2023	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD					
	P.O. NO. & DATE	CD/CC	/WO/202	23-24/10	DATED- 25.05	.2023	
115	SEASON		P	OST MO	NSOON		
Sec.	Sample Description	F1 (1)	Eff	luent Di	scharged		
	Location of Sample	Pond Water Ta (CORE ZO		Analy	sis Started on	29/11/2023	
D	Date & Time Sample Collection	28/11/2023 01:10 PM		Analysis completed on 04/12/2		04/12/2023	
	Test Procedure	IS:3025					
		TEST RES	ULT	No. of Lot	THE RESIDENCE		
SI. No.	Parameters	Unit	Value		Effluent W IS: 249		
1.	pH value	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	7.5		5.5 to 9.0		
2.	Colour,	Hazen units,	(<5)		5		
3.	Odour*		Agreeal	ble	Annexure-1		
4.	Conductivity, µS/cm	μS/cm	760	NS		4	
5.	Turbidity (NTU)	NTU	9.0	NS			
6.	Total Dissolved Solids mg/l	mg/l	494	2100			
7.	Total Suspended Solids mg/l, max,	mg/l	34	1	100		
8.	Dissolved Oxygen (DO)	mg/l	5.5	NS		ev in	
9.	Oil and grease, mg/l	mg/l	BDL	1	10		
10.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH),	mg/l max	O	1/	1.0	MIN JI di	
11.	B.O.D.	mg/l	110		30		
	C.O.D.	mg/l	9.2		250		

BDL - Below Detection Limit

NS - Not Specified





Technical Manager Aditi R&D Services, Sindri

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Phone: 0326-2952377 (O)

Mobile: 09471358492, 09431512608

#### TEST REPORT OF EFFLUENT WATER FOR THE MONTH OF NOVEMBER 2023

	Ref. No. & Date	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD					
	ARDS/23-24/1540 Dt. 05/12/2023						
HI.	P.O. NO. & DATE	CD/CC	C/WO/20	23-24/10	DATED- 25.0	5.2023	
	SEASON	1001	- / P	OST MO	NSOON		
340	Sample Description		-16 L	MINE W	ATER		
	Location of Sample	TASRA EXISTING Analysis Started or MINE PIT, TASRA OCP (CORE ZONE)		sis Started on	29/11/2023		
Date & Time Sample Collection		COLUMN TO SERVICE AND ADDRESS OF THE PARTY O	28/11/2023 Analys 02:20 PM		s completed on	04/12/2023	
	Test Procedure	IS:3025					
		TEST RES	ULT				
SI. No.	Parameters	Unit	Value	е	Effluent V IS: 249		
1.	pH value		7.2	74	5.5 to 9	.0	
2.	Colour,	Hazen units,	(<5)		5		
3.	Odour*		Agreea	ble	Annexu	·e-1	
4.	Conductivity, µS/cm	μS/cm	800	9:	NS		
5.	Turbidity (NTU)	NTU	4.0	NS NS			
6.	Total Dissolved Solids mg/l	mg/l	520	2100			
7.	Total Suspended Solids mg/l, max,	mg/l	29	1	100		
8.	Dissolved Oxygen (DO)	mg/l	5.1	NS			
9.	Oil and grease, mg/l	mg/l	BDL	10	10		
10.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH),	mg/l max	1	Tell in	1.0		
11.	B.O.D.	mg/l	7.6	on his	30		
12.	C.O.D.	mg/l	92		250		

**BDL - Below Detection Limit** 

NS - Not Specified

Sr. Chemist Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri

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Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/23-24/2039

Date: 02/03/2024

## TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry :

TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order P.O. NO. & Date:

6000036592 & Date: 29.01.2024

Date of Sample Collection:

26/02/2024 to 27/02/2024

Date of Testing

28/02/2024 to 01/03/2024

Test Procedure

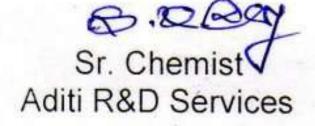
As per IS - 5182

Sampling Location

TASRA (NEAR ARYA SAMAJ, SINDRI)

### TEST RESULTS

		CORE ZO	NE		
	Avg. Ambient Average Relative Humidity (%)		Sample Location	NAAQ - CPCB STANDAR	
	24	54	TASRA NEAR ARYA SAMAJ, SINDRI		
SI No.	Particulars		Value	1	
1.	Particulate Matter (F	PM <sub>10</sub> ), µg/m <sup>3</sup>	77.63	100 µg/m³	
2.	Particulate Matter (F	PM <sub>2.5</sub> ), µg/m <sup>3</sup>	42.70	60 µg/m³	
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		33.86	80 µg/m³	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>		27.48	80 µg/m³	
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		16.36	400 µg/m³	
6.	CO, mg/m <sup>3</sup>	1/1/	0.81	4 mg/m <sup>3</sup>	
7.	Pb, μg/m <sup>3</sup>	VI VI	B.D.L	1 µg/m³	
8.	As, ng/m <sup>3</sup>		BDL	6ng/m³	
9.	Ni, ng/m <sup>3</sup>		BDL	20ng/m <sup>3</sup>	
10.	Benzene, µg/m³		BDL	5 μg/m <sup>3</sup>	
11.	Benzoapyreneng/m <sup>3</sup>		BDL	1ng/m³	
12.	Ozone, µg/m³	9	15.30	180 µg/m³	





Technical Manager Aditi R&D Services, Sindri

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Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O)

Date: 02/03/2024

Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/23-24/2040

## TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry :

TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order P.O. NO. & Date:

6000036592 & Date: 29.01.2024

Date of Sample Collection:

26/02/2024 TO 27/02/2024

Date of Testing

28/02/2024 TO 01/03/2024

Test Procedure

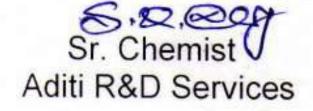
As per IS - 5182

Sampling Location

KANDRA (COAL BOARD COLONY)

### TEST RESULTS

			NAAQ - CPCB STANDARD	
	Avg. Ambient Temperature 24	Average Relative Humidity (%) 54	Sample Location KANDRA (COAL BOARD COLONY)	•
SI No.	Particulars		Value	
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>		73.52	100 µg/m³
2.	Particulate Matter (	PM <sub>2.5</sub> ), µg/m <sup>3</sup>	40.44	60 μg/m <sup>3</sup>
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		30.82	80 µg/m³
4.	NO <sub>2</sub> , µg/m <sup>3</sup>	II.	26.42	80 µg/m³
5.	NH <sub>3</sub> , µg/m <sup>3</sup>	"/VA	16.83	400 µg/m³
6.	CO, mg/m <sup>3</sup>	COLD	0.77	4 mg/m <sup>3</sup>
7.	Pb, µg/m <sup>3</sup>	The same of the sa	BDL	1 µg/m³
8.	As, ng/m <sup>3</sup>	THE PERSONS	BDL	6ng/m <sup>3</sup>
9.	Ni, ng/m <sup>3</sup>		BDL	20ng/m³
10.	Benzene, µg/m <sup>3</sup>		BDL	5 µg/m³
11.	Benzoapyreneng/m	3	BDL	1ng/m³
12.	Ozone, µg/m <sup>3</sup>		16.32	180 µg/m³





Technical Manager Aditi R&D Services, Sindri

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# Testing Laboratory NABL ACCREDITED

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ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O)

Mobile: 09471358492, 09431512608

Date: 02/03/2024

## TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry

Ref. No.: - ARDS/23-24/2041

TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order P.O. NO. & Date:

6000036592 & Date: 29.01.2024

Date of Sample Collection:

26/02/2024 TO 27/02/2024

Date of Testing

28/02/2024 TO 01/03/2024

Test Procedure

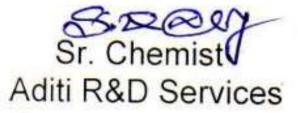
As per IS - 5182

Sampling Location

CHASNALLA (G.M. OFFICE)

TEST RESULTS

		NAAQ - CPCB STANDARD		
	Avg. Ambient Temperature 24	Average Relative Humidity (%)	Sample Location CHASNALLA	
SI No.	Particulars	54	Value	
1.	Particulate Matter (	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>		100 µg/m <sup>3</sup>
2.	Particulate Matter (	PM <sub>2.5</sub> ), μg/m <sup>3</sup>	75.48 41.52	60 µg/m³
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		36.56	80 µg/m³
4.	NO <sub>2</sub> , µg/m <sup>3</sup>		24.38	80 µg/m³
5.	NH <sub>3</sub> , µg/m <sup>3</sup>		16.84	400 µg/m <sup>3</sup>
6.	CO, mg/m <sup>3</sup>	/A STREET	0.84	4 mg/m <sup>3</sup>
7.	Pb, µg/m³	111100	BDL	1 µg/m³
8.	As, ng/m <sup>3</sup>	VINIA	BDL	6ng/m³
9.	Ni, ng/m <sup>3</sup>	The first	BDL	20ng/m³
10.	Benzene, µg/m <sup>3</sup>		BDL	5 μg/m <sup>3</sup>
11.	Benzoapyreneng/m	3	BDL	3 μg/m³
12.	Ozone, µg/m³		17.48	180 µg/m³





Technical Manager Aditi R&D Services, Sindri

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Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O)

Mobile: 09471358492, 09431512608

Date: 02/03/2024

## TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry :

Ref. No.: - ARDS/23-24/2042

TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order P.O. NO. & Date:

6000036592 & Date: 29.01.2024

Date of Sample Collection:

26/02/2024 TO 27/02/2024

Date of Testing

28/02/2024 TO 01/03/2024

Test Procedure

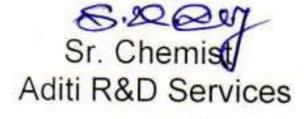
As per IS - 5182

Sampling Location

ROHRABANDH (NEAR LIC OFFICE BACK SIDE)

TEST RESULTS

	CORE ZONE			NAAQ - CPCB STANDARD
	Avg. Ambient Temperature	Average Relative Humidity (%)	Sample Location ROHRABANDH	
SI No.	Doutiou laws	54		
31 NO.	Particulars		Value	A Property of the second
1.	Particulate Matter	(PM <sub>10</sub> ), µg/m <sup>3</sup>	78.79	100 µg/m <sup>3</sup>
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>		46.28	60 µg/m³
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		32.25	80 µg/m³
4.	NO <sub>2</sub> , µg/m <sup>3</sup>		26.38	80 µg/m³
5.	NH <sub>3</sub> , µg/m <sup>3</sup>	7	16.32	400 µg/m³
6.	CO, mg/m <sup>3</sup>	IA - Therenes	0.76	4 mg/m <sup>3</sup>
7.	Pb, µg/m <sup>3</sup>	1/1/1	BDL	1 µg/m <sup>3</sup>
8.	As, ng/m <sup>3</sup>	V 17/7	BDL	6ng/m³
9.	Ni, ng/m <sup>3</sup>	The state of the s	BDL	20ng/m³
10.	Benzene, µg/m <sup>3</sup>		BDL	5 μg/m <sup>3</sup>
11.	Benzoapyreneng/r	n <sup>3</sup>	BDL	1ng/m³
12.	Ozone, µg/m³		16.25	180 µg/m³





Technical Manager Aditi R&D Services, Sindri

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## Testing Laboratory NABL ACCREDITED

(A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608

Date: 05/03/2024

Ref. No.: - ARDS/23-24/2053

## TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order P.O. NO. & Date: 6000036592 & Date: 29.01.2024

Date of Sample Collection: 28/02/2024 TO 29/02/2024

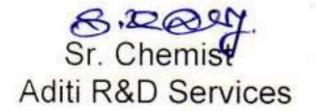
Date of Testing 01/03/2024 TO 04/03/2024 **Test Procedure** 

Sampling Location DIGWADIH (JEALGORA GUEST HOUSE)

TEST RESULTS

As per IS - 5182

		BUFFER ZON	IE	NAAQ - CPCB STANDARD	
	Avg. Ambient Average Relative Temperature Humidity (%)		Sample Location		
	24	54	DIGWADIH		
SI No.	Particulars		Value		
1.	Particulate Matter	(PM <sub>10</sub> ), µg/m <sup>3</sup>	62.47	100 μg/m³	
2.	Particulate Matter	(PM <sub>2.5</sub> ), µg/m <sup>3</sup>	35.48	60 µg/m <sup>3</sup>	
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		24.30	80 µg/m³	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>		28.45	80 µg/m³	
5.	NH <sub>3</sub> , µg/m <sup>3</sup>	. 9	17.35	400 µg/m³	
6.	CO, mg/m <sup>3</sup>	1	0.57	4 mg/m <sup>3</sup>	
7.	Pb, µg/m <sup>3</sup>	111	BDL	1 µg/m³	
8.	As, ng/m <sup>3</sup>	711121	BDL	6ng/m <sup>3</sup>	
9.	Ni, ng/m <sup>3</sup>	The same of the	BDL	20ng/m³	
10.	Benzene, µg/m <sup>3</sup>		BDL	5 μg/m <sup>3</sup>	
11.	Benzoapyreneng/r	n <sup>3</sup>	BDL	1ng/m <sup>3</sup>	
12.	Ozone, µg/m <sup>3</sup>	(7 ) )	20.42	180 µg/m³	





Technical Manager Aditi R&D Services, Sindri

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Testing Laboratory
NABL ACCREDITED

(A Constituent Board of Quality Council of India)
ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O)

Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/23-24/2054 Date: 05/03/2024

## TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry : TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order P.O. NO. & Date: 6000036592 & Date: 29.01.2024

Date of Sample Collection: 28/02/2024 TO 29/02/2024

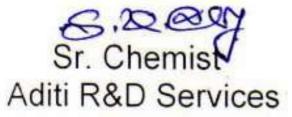
Date of Testing : 01/03/2024 TO 04/03/2024

Test Procedure : As per IS - 5182

Sampling Location : BAGHMARA (NEAR MAA HOSPITAL)

TEST RESULTS

<b>E</b>	BUFFER ZOI	NE	NAAQ - CPCB STANDARD
Avg. Amb Temperat	The state of the s	Sample Location	
24	54	BAGHMARA	
Particular		Value	
Particulate	Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	54.29	100 µg/m³
Particulate	Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	30.58	60 µg/m <sup>3</sup>
SO <sub>2</sub> , µg/m <sup>3</sup>		22.82	80 μg/m <sup>3</sup>
NO <sub>2</sub> , µg/m <sup>3</sup>	100	20.86	80 µg/m³
NH <sub>3</sub> , µg/m <sup>3</sup>	Charles and	17.48	400 μg/m <sup>3</sup>
CO, mg/m <sup>3</sup>	L FIRST	0.52	4 mg/m³
Pb, µg/m <sup>3</sup>	V	BDL	1 µg/m³
As, ng/m <sup>3</sup>	FLY	BDL	6ng/m <sup>3</sup>
Ni, ng/m <sup>3</sup>	The same of the sa	BDL	20ng/m³
Benzene, µ	g/m <sup>3</sup>	BDL	5 μg/m <sup>3</sup>
Benzoapyre	neng/m <sup>3</sup>	BDL	1ng/m³
Ozone, µg/ı	n <sup>3</sup>	21.56	180 µg/m³
Benzoapyre		neng/m³	neng/m <sup>3</sup> BDL





Technical Manager Aditi R&D Services, Sindri

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Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O)

Mobile: 09471358492, 09431512608

Date: 05/03/2024

## TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry :

Ref. No.: - ARDS/23-24/2055

TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order P.O. NO. & Date:

6000036592 & Date: 29.01.2024

Date of Sample Collection:

28/02/2024 TO 29/02/2024

Date of Testing

01/03/2024 TO 04/03/2024

Test Procedure

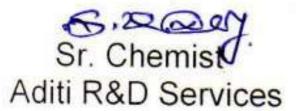
As per IS - 5182

Sampling Location

BHOJUDIH (NEAR RAILWAY COLONY)

### TEST RESULTS

		BUFFER ZON		NAAQ - CPCB STANDARD
	Avg. Ambient Temperature	Average Relative Humidity (%)	Sample Location	
	24	54	BHOJUDIH	
SI No.	Particulars		Value	
1.	Particulate Matter		64.36	100 µg/m <sup>3</sup>
2.	Particulate Matter	(PM <sub>2.5</sub> ), µg/m <sup>3</sup>	37.62	60 µg/m³
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		23.52	80 µg/m³
4.	NO <sub>2</sub> , µg/m <sup>3</sup>	The same of the sa	29.83	80 µg/m³
5.	NH <sub>3</sub> , µg/m <sup>3</sup>	The second second	17.64	400 µg/m³
6.	CO, mg/m <sup>3</sup>	1/A Thomas	0.64	4 mg/m <sup>3</sup>
7.	Pb, μg/m <sup>3</sup>	11111	BDL	1 µg/m³
8.	As, ng/m <sup>3</sup>	V ( -, /	BDL	6ng/m³
9.	Ni, ng/m <sup>3</sup>		BDL	20ng/m³
10.	Benzene, µg/m <sup>3</sup>		BDL	5 μg/m³
11.	Benzoapyreneng/r	n <sup>3</sup>	BDL	1ng/m³
12.	Ozone, µg/m³		22.59	180 µg/m³





Technical Manager Aditi R&D Services, Sindri

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# Testing Laboratory NABL ACCREDITED

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Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/23-24/2056 Date: 05/03/2024

## TEST REPORT OF AMBIENT AIR QUALITY

Name of the industry : TASRA COAL MINING PROJECT, COLLIERIES DIVISION,

STEEL AUTHORITY OF INDIA LTD.

CHASNALLA - 828135, DIST. - DHANBAD

Work Order P.O. NO. & Date: 6000036592 & Date: 29.01.2024

Date of Sample Collection: 28/02/2024 TO 29/02/2024
 Date of Testing : 01/03/2024 TO 04/03/2024

Test Procedure : As per IS - 5182

Sampling Location : JORADIH (NEAR TEMPLE)

TEST RESULTS

	176	BUFFER ZONE		NAAQ - CPCB STANDARD	
	Avg. Ambient Temperature	Average Relative Humidity (%)	Sample Location		
	24	54	JORADIH (NEAR TEMPLE)		
SI No.	Particulars		Value	•	
1.	Particulate Matter	(PM <sub>10</sub> ), µg/m <sup>3</sup>	59.31	100 µg/m <sup>3</sup>	
2.	Particulate Matter	(PM <sub>2.5</sub> ), µg/m <sup>3</sup>	34.57	60 µg/m <sup>3</sup>	
3.	SO <sub>2</sub> , µg/m <sup>3</sup>		22.62	80 µg/m <sup>3</sup>	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>	The second second	30.56	80 µg/m <sup>3</sup>	
5.	NH <sub>3</sub> , µg/m <sup>3</sup>	110	18.52	400 µg/m <sup>3</sup>	
6.	CO, mg/m <sup>3</sup>	11 11	0.53	4 mg/m <sup>3</sup>	
7.	Pb, μg/m <sup>3</sup>		BDL	1 μg/m <sup>3</sup>	
8.	As, ng/m <sup>3</sup>	The same of the same of	BDL	6ng/m <sup>3</sup>	
9.	Ni, ng/m <sup>3</sup>	The state of the s	BDL	20ng/m <sup>3</sup>	
10.	Benzene, µg/m <sup>3</sup>		BDL	5 μg/m <sup>3</sup>	
11.	Benzoapyreneng/	m <sup>3</sup>	BDL	1ng/m³	
12.	Ozone, µg/m³		21.62	180 µg/m <sup>3</sup>	

Sr. Chemist Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri

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Testing Laboratory
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Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O)

Mobile: 09471358492, 09431512608

#### TEST REPORT OF EFFLUENT WATER FOR THE MONTH OF JANUARY 2024

	Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT				
	ARDS/23-24/1786 Dt. 23/01/2024	TASRA COLLIERY DIVISION STEEL AUTHORITY OF INDIA LTD. CHASNALA – 828135, DHANBAD				
	P.O. NO. & DATE	CD/CC/WO/2023-24/10 DATED- 25.05.2023				
	SEASON	101	F	OST	MONSOON	
	Sample Description		217	Mine	Water	
	Location of Sample	Pond Wate Tasara E (CORE Z	Basti	sti / mary sis clarted on		
	Date & Time Sample Collection	17/01/2024 04:45 PM		Analysis completed on 22/		22/01/2024
	Test Procedure			IS:	3025	
		TEST RE	SULT		THE REAL PROPERTY.	AND THE REAL PROPERTY.
SI. No.	Parameters	Unit	Valu	е	Effluent Water	ls : 2490
1.	pH value	_	7.6		5.5 to 9	.0
2.	Colour,	Hazen units,	(<5)		5	
3.	Odour*		Agreea	ble	Annexur	e-1
4.	Conductivity, µS/cm	μS/cm	640		NS NS	
5.	Turbidity (NTU)	NTU	2.4	-	NS	
6.	Total Dissolved Solids mg/l	mg/l	420		2100	J
7.	Total Suspended Solids mg/l, max,	mg/l	36		100	
8.	Dissolved Oxygen (DO)	mg/l	6.4	A STATE OF THE PARTY OF THE PAR	NS	

NS - Not Specified

C<sub>6</sub>H<sub>5</sub>OH),

C.O.D

B.O.D

10.

11.

Oil and grease, mg/l

Phenolic compounds (as

Sr. Chemist Aditi R&D Services



mg/l

mg/I max

(mg/l)

(mg/I)

0.8

32.6

3.4

Technical Manager Aditi R&D Services, Sindri

10

1.0

250

30

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#### Testing Laboratory

Recognised by Jharkhand State Pollution Control Board

AN ISO 9001:2008 and OHSAS 18001:2007 Certified Firm

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Phone: 0326-2952377 Mobile: 09471358492

09431512608

#### TEST REPORT OF EFFLUENT WATER FOR THE MONTH OF JANUARY 2024

	Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT				
	ARDS/23-24/1787	TASRA COLLIERY DIVISION				
	Dt. 23/01/2024	ST	EEL AU	THORIT	Y OF INDIA LT	D.
		С	HASNAL	A - 828	135, DHANBA	D
	P.O. NO. & DATE	CD/CC/WO/2023-24/10 DATED- 25.05.2023				5.2023
24	SEASON	POST MONSOON				
	Sample Description	701	Maria .	MINE W	ATER	H-C
	Location of Sample	TASRA EXIS MINE PIT, TAS (CORE ZO	RA OCP	Analys	is Started on	18/01/2024
	Date & Time Sample Collection	17/01/20 04:40 P	24	Analysis	ysis completed on 22/01/20	
	Test Procedure			IS:30	25	
		TEST RES	ULT			The Park
SI. No.	Parameters	Unit	Value		Effluent Water	ls : 2490
1.	pH value	- Year	7.8	a TIE	5.5 to 9	.0
2.	Colour,	Hazen units,	(<5)		5	
3.	Odour*		Agreeal	ole	Annexur	e-1
4.	Conductivity, µS/cm	μS/cm	920		NS	
5.	Turbidity (NTU)	NTU	3.5	1	NS	
6.	Total Dissolved Solids mg/l	mg/l	599	1 1	2100	
7.	Total Suspended Solids mg/l, max,	mg/l	38	1	100	
8.	Dissolved Oxygen (DO)	mg/l	6.8	10	NS NS	7
9.	Oil and grease, mg/l	mg/l	BDL		10	
10.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH),	mg/I max	)/~!	Marie Control	1.0	
11.	C.O.D	(mg/l)	40.8		250	
12.	B.O.D	(mg/l)	5.5		30	

NS - Not Specified

**BDL** - Below Detection limit

Sr. Chemist Aditi R&D Services

Technical Manager Aditi R&D Services, Sindri

E-mail ID: sindriaditi@gmail.com Website: aditirndservices.com



## Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified Plot No. - I-B-17 (P) Annexure - IX Sindri, Industrial Area,

P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608

## TEST REPORT OF DRINKING WATER FOR THE MONTH OF FEBRUARY 2024

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT			
ARDS/23-24/2057 Dt. 05/03/2024	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD			
P.O. NO. & Date	6000036592 & D			
Season	POST MONSOON			
Location of Sample		TASRA ( CORE ZONE )		
Sample Description	AND PASSED	GROUND WATER		
	patients and the same of the s	Analysis Started on : 27	/02/2024	
Date of Sample Collection	26/02/2024	Analysis completed on	04/03/2024	
Test Procedure	IS:3025			
A DE DELEMENT DE LA COMPANION	TEST RESU	The state of the s		

O.L		RESULT		
SI.	Parameters			500: 2012
No.			Accepted Limit	Permissible Limit
1.	Colour Hazen units	1	5	15
2.	Odour	Agreeable	Agreeable	Agreeable
3.	Taste	Agreeable	Agreeable	Agreeable
4.	Turbidity NTU Max	2.4	1 1	5
5.	Total Dissolved Solids mg/l, Max	720	500	2000
6.	pH Value	7.3	6.5 to 8.5	6.5 to 8.5
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	541.8	200	600
8.	Calcium (as Ca) mg/l, Max	154.8	75	200
9.	Magnesium (as Mg)mg/l, Max	37.3	30	100
10.	Copper (as Cu) mg/l, Max	0.02	0.05	1.5
11.	Iron (as Fe) mg/l Max	0.05	1.0	• NR
12.	Manganese (as Mn) mg/l, Max	< 0.001	0.1	0.3
13.	Chlorides (as CI) mg/l, Max	100.7	250	1000
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	19.6	200	400
15.	Nitrate mg/l, (as NO <sub>3)</sub>	4.6	45	NR
16.	Fluoride (as F) mg/l	0.42	1.0	1.5
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max		0.001	0.002
18.	Mercury (as Hg)mg/l, Max	- N	0.001	NR
19.	Cadmium (as Cd) mg/l, Max	NV	0.01	NR
20.	Selenium (as Se mg/l, Max		0.01	NR
21.	Arsenic (as As) mg/l, Max	< 0.001	0.01	0.05
22.	Cyanide (as Cn) mg/l, Max	< 0.001	0.05	NR
23.	Lead (As Pb) mg/l Max	< 0.001	0.05	NR
24.	Zinc (as Zn) mg/l Max	0.44	5.0	- 15
25.	Arionic detergents (as MBAS), mg/l, Max	( <b>-</b>	0.2	1.0
26.	Chromium (as Cr+6) mg/l	0.007	0.05	NR ·
27.	Mineral Oil mg/l, Max	(95)	0.01	NR
28.	Residual, free chlorine mg/l, Min	NIL	0.2	1.0

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS - 10500 : 2012

NR- No Relaxation Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri

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- 2. The test results reported in this report are valid at the time of and under the stated condition of measurment.
- 3. This particular test report cannot be reproduced except in full without prior permission of Quality Manager of the laboratory.



## Testing Laboratory NABL ACCREDITED

(A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608

# TEST REPORT OF DRINKING WATER FOR THE MONTH OF FEBRUARY 2024

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT				
ARDS/23-24/2058 Dt. 05/03/2024	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD				
P.O. NO. & Date	6000036592 & Date: 29.01.2024				
Season					
Location of Sample		POST MONSOON ROHRABANDH ( CORE ZONE )			
Sample Description	GROUND WATER				
D 1 10 1 1 1		Analysis Started on : 2	7/02/2024		
Date of Sample Collection	26/02/2024	Analysis completed on	04/03/2024		
Test Procedure	The second second second second	IS:3025	04/00/2024		

SI. No.	Parameters	Value	IS: 1050	0: 2012
or processors			Accepted Limit	Permissible Limit
1.	Colour Hazen units	1	5	15
2.	Odour	Agreeable	Agreeable	Agreeable
3.	Taste	Agreeable	Agreeable	Agreeable
4.	Turbidity NTU Max	0.9	1	5
5.	Total Dissolved Solids mg/l, Max	658	500	2000
6.	pH Value	7.2	6.5 to 8.5	6.5 to 8.5
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	403.2	200	600
8.	Calcium (as Ca) mg/l, Max	120.96	75	200
9.	Magnesium (as Mg)mg/l, Max	24.2	30	• 100
10.	Copper (as Cu) mg/l, Max	0.04	0.05	1.5
11.	Iron (as Fe) mg/l Max	0.08	1.0	
12.	Manganese (as Mn) mg/l, Max	< 0.001	0.1	NR 0.3
13.	Chlorides (as CI) mg/l, Max	64.58	250	0.3
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	54.30	200	1000
15.	Nitrate mg/l, (as NO <sub>3)</sub>	7.7	45	400
16.	Fluoride (as F) mg/l	0.58	1.0	NR
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	-070	0.001	1.5
18.	Mercury (as Hg)mg/l, Max	MILT	0.001	0.002
19.	Cadmium (as Cd) mg/l, Max	21 11		NR
20.	Selenium (as Se mg/l, Max		0.01	NR
21.	Arsenic (as As) mg/l, Max	<0.001	0.01	NR
22.	Cyanide (as Cn) mg/l, Max	<0.001	0.01	0.05
23.	Lead (As Pb) mg/l Max	<0.001	0.05	NR
24.	Zinc (as Zn) mg/l Max	0.56	0.05	NR
5.	Arionic detergents (as MBAS), mg/l, Max	0.00	5.0	15
6.	Chromium (as Cr+5) mg/l	0.01	0.2	1.0
7.	Mineral Oil mg/l, Max	0.01	0.05	NR -
8.	Residual, free chlorine mg/l, Min	AIII	0.01	NR
	The state of the s	NIL	0.2	1.0

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS - 10500 : 2012

NR- No Relaxation

Statement R&D Services

DHANBAD, 1. The test report refers only to the particular item(s) submitted for testing.

Technical Manager Aditi R&D Services, Sindri

- 2. The test results reported in this report are valid at the time of and under the stated condition of measurment.
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# Testing Laboratory

NABL ACCREDITED

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Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608

### TEST REPORT OF DRINKING WATER FOR THE MONTH OF FEBRUARY 2024

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT			
ARDS/23-24/2059 Dt. 05/03/2024	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD			
P.O. NO. & Date	6000036592 & Date: 29.01.2024			
Season	POST MONSOON			
Location of Sample	KAN	NDRA ( CORE ZONE )	5	
Sample Description		GROUND WATER		
	OH CIT	Analysis Started on : 2	27/02/2024	
Date of Sample Collection	26/02/2024 Analysis completed on 04/03/2024			
Test Procedure	IS:3025			
	TEST RESULT	THE WINDSHIP STORY		

	TEST	RESULT		
SI.			IS: 1050	0: 2012
No.			Accepted Limit	Permissible Limit
1.	Colour Hazen units	1	5	15
2.	Odour	Agreeable	Agreeable	Agreeable
3.	Taste	Agreeable	Agreeable	Agreeable
4.	Turbidity NTU Max	3.0	1 1	5
5.	Total Dissolved Solids mg/l, Max	804	500	2000
6.	pH Value	7.1	6.5 to 8.5	6.5 to 8.5
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	592.2	200	600
8.	Calcium (as Ca) mg/l, Max	173.0	75	200
9.	Magnesium (as Mg)mg/l, Max	38.3	30	100
10.	Copper (as Cu) mg/l, Max	0.04	0.05	1.5
11.	Iron (as Fe) mg/l Max	0.06	1.0	NR
12.	Manganese (as Mn) mg/l, Max	<0.001	0.1	0.3
13.	Chlorides (as CI) mg/l, Max	138.66	250	1000
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	14.4	200	400
15.	Nitrate mg/l, (as NO <sub>3)</sub>	7.1	45	NR
16.	Fluoride (as F) mg/l	0.62	1.0	1.5
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max		0.001	0.002
18.	Mercury (as Hg)mg/l, Max		0.001	NR
19.	Cadmium (as Cd) mg/l, Max	41 14	0.01	NR
20.	Selenium (as Se mg/l, Max		0.01	NR
21.	Arsenic (as As) mg/l, Max	< 0.001	0.01	0.05
22.	Cyanide (as Cn) mg/l, Max	< 0.001	0.05	NR
23.	Lead (As Pb) mg/l Max	<0.001	0.05	NR
24.	Zinc (as Zn) mg/l Max	0.48	5.0	15
25.	Arionic detergents (as MBAS), mg/l, Max		0.2	1.0
26.	Chromium (as Cr+ <sup>6</sup> ) mg/l	0.009	0.05	NR
27.	Mineral Oil mg/l, Max		0.01	NR -
28.	Residual, free chlorine mg/l, Min	NIL	0.2	1.0

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS - 10500 : 2012

NR- No Relaxation

Statementsditi R&D Services

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3. This particular test report cannot be reproduced except in full without prior permission of Quality Manager of the laboratory.

Technical Manager Aditi R&D Services, Sindri



# Testing Laboratory

NABL ACCREDITED

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ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O)

Mobile: 09471358492, 09431512608

TEST REPORT OF SURFACE WATER FOR THE MONTH OF FEBRUARY 2024

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT		
ARDS/23-24/2065 Dt. 06/03/2024	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD		
P.O. NO. & Date	6000036592 & Date: 29.01.2024		
Season	POST MONSOON		
Location of Samp UPSTREAM OF DAI		Analysis Started on	28/02/2024
Date & Time Sample Collection	27/02/2024	Analysis completed on	05/03/2024
Test Procedure	IS:3025		

	TEST RES	JLT	STATE OF THE PARTY
SI. No.	Parameters	Value	(IS :2296) Surface Water Class "C" Tolerance Limit
1.	Colour Hazen units	1	300
2.	Dissolved Oxygen, mg/l	5.3	4
3.	B.O.D. (3 days at 27°C)	1.7	3
4.	Total Dissolved Solids mg/l, Max	352	1500
5.	pH Value	8.1	6.5 - 8.5
6.	Conductivity (µs/CM)	540	
7.	Turbidity (NTU)	1.8	
8.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	-	0.005
9.	Oil and grease, mg/l	BDL	0.1
10.	C.O.D., mg/l	29.9	
11.	Total Suspended Solids , mg/l	32	

Remarks: All the parameters of samples tested are within the permissible limit of General standard. BDL – Below Detection Limit

Sr. Chemist Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri

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## **Testing Laboratory**

NABL ACCREDITED

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Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O)

Mobile: 09471358492, 09431512608

TEST REPORT OF SURFACE WATER FOR THE MONTH OF FEBRUARY 2024

Ref. No. & Date	NAME AND	ADDRESS OF THE CLIENT	
ARDS/23-24/2061 Dt. 05/03/2024	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD		
P.O. NO. & Date	6000036592 & Date: 29.01.2024		
Season		POST MONSOON	
Location of DOWNSTREAM OF D	The state of the s	Analysis Started on	27/02/2024
Date & Time Sample Collection	26/02/2024	Analysis completed on	04/03/2024
Test Procedure		IS:3025	

	Test Procedure	IS:302	5
	TEST RES	ULT	
SI. No.	Parameters	Value	(IS :2296) Surface Water Class "C" Tolerance Limit
1.	Colour Hazen units	1	300
2.	Dissolved Oxygen, mg/l	5.1	4
3.	B.O.D. (3 days at 27°C)	1.9	3
4.	Total Dissolved Solids mg/l, Max	345	1500
5.	pH Value	8.2	6.5 + 8.5
6.	Conductivity (µS/cm)	530	
7.	Turbidity (NTU)	2.0	
8.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max		0.005
9.	Oil and grease, mg/l	BDL	0.1
10.	C.O.D., mg/l	22.5	
11.	Total Suspended Solids , mg/l	35	_

Remarks: All the parameters of samples tested are within the permissible limit of General standard. BDL – Below Detection Limit

Sr. Chemist Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri

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## Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified Plot No. - I-B-17 (P) Annexure - IX Sindri, Industrial Area,

P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608

## TEST REPORT OF DRINKING WATER FOR THE MONTH OF FEBRUARY 2024

Ref. No. & Date	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD				
ARDS/23-24/2057 Dt. 05/03/2024					
P.O. NO. & Date	6000036592 & Date: 29.01.2024				
Season	POST MONSOON				
Location of Sample		TASRA ( CORE ZONE )			
Sample Description	AND PASSED	GROUND WATER			
	patients and the same of the s	Analysis Started on : 27	/02/2024		
Date of Sample Collection	26/02/2024 Analysis completed on 04/03/2024				
Test Procedure	IS:3025				
A DE DELEMENT DE LA COMPANION	TEST RESU	The state of the s			

O.L		RESULT				
SI.	Parameters	Value	IS: 10500: 2012			
No.			Accepted Limit	Permissible Limit		
1.	Colour Hazen units	1	5	15		
2.	Odour	Agreeable	Agreeable	Agreeable		
3.	Taste	Agreeable	Agreeable	Agreeable		
4.	Turbidity NTU Max	2.4	1 1	5		
5.	Total Dissolved Solids mg/l, Max	720	500	2000		
6.	pH Value	7.3	6.5 to 8.5	6.5 to 8.5		
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	541.8	200	600		
8.	Calcium (as Ca) mg/l, Max	154.8	75	200		
9.	Magnesium (as Mg)mg/l, Max	37.3	30	100		
10.	Copper (as Cu) mg/l, Max	0.02	0.05	1.5		
11.	Iron (as Fe) mg/l Max	0.05	1.0	• NR		
12.	Manganese (as Mn) mg/l, Max	< 0.001	0.1	0.3		
13.	Chlorides (as CI) mg/l, Max	100.7	250	1000		
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	19.6	200	400		
15.	Nitrate mg/l, (as NO <sub>3)</sub>	4.6	45	NR		
16.	Fluoride (as F) mg/l	0.42	1.0	1.5		
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max		0.001	0.002		
18.	Mercury (as Hg)mg/l, Max	- N	0.001	NR		
19.	Cadmium (as Cd) mg/l, Max	NV	0.01	NR		
20.	Selenium (as Se mg/l, Max		0.01	NR		
21.	Arsenic (as As) mg/l, Max	< 0.001	0.01	0.05		
22.	Cyanide (as Cn) mg/l, Max	< 0.001	0.05	NR		
23.	Lead (As Pb) mg/l Max	< 0.001	0.05	NR		
24.	Zinc (as Zn) mg/l Max	0.44	5.0	- 15		
25.	Arionic detergents (as MBAS), mg/l, Max	( <b>-</b>	0.2	1.0		
26.	Chromium (as Cr+6) mg/l	0.007	0.05	NR ·		
27.	Mineral Oil mg/l, Max	(95)	0.01	NR		
28.	Residual, free chlorine mg/l, Min	NIL	0.2	1.0		

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS - 10500 : 2012

NR- No Relaxation Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri

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## Testing Laboratory NABL ACCREDITED

(A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608

# TEST REPORT OF DRINKING WATER FOR THE MONTH OF FEBRUARY 2024

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT  TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD				
ARDS/23-24/2058 Dt. 05/03/2024					
P.O. NO. & Date	6000036592 & Date: 29.01.2024				
Season	POST MONSOON				
Location of Sample		ABANDH ( CORE ZONE )	4		
Sample Description		GROUND WATER			
D 1 10 1 1 1		Analysis Started on : 2	7/02/2024		
Date of Sample Collection	26/02/2024 Analysis completed on 04/03/2024				
Test Procedure					

SI. No.	Parameters	Value	IS: 1050	0: 2012
or processors			Accepted Limit	Permissible Limit
1.	Colour Hazen units	1	5	15
2.	Odour	Agreeable	Agreeable	Agreeable
3.	Taste	Agreeable	Agreeable	Agreeable
4.	Turbidity NTU Max	0.9	1	5
5.	Total Dissolved Solids mg/l, Max	658	500	2000
6.	pH Value	7.2	6.5 to 8.5	6.5 to 8.5
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	403.2	200	600
8.	Calcium (as Ca) mg/l, Max	120.96	75	200
9.	Magnesium (as Mg)mg/l, Max	24.2	30	• 100
10.	Copper (as Cu) mg/l, Max	0.04	0.05	1.5
11.	Iron (as Fe) mg/l Max	0.08	1.0	
12.	Manganese (as Mn) mg/l, Max	< 0.001	0.1	NR 0.3
13.	Chlorides (as CI) mg/l, Max	64.58	250	0.3
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	54.30	200	1000
15.	Nitrate mg/l, (as NO <sub>3)</sub>	7.7	45	400
16.	Fluoride (as F) mg/l	0.58	1.0	NR
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	-070	0.001	1.5
18.	Mercury (as Hg)mg/l, Max	MILT	0.001	0.002
19.	Cadmium (as Cd) mg/l, Max	21 11		NR
20.	Selenium (as Se mg/l, Max		0.01	NR
21.	Arsenic (as As) mg/l, Max	<0.001	0.01	NR
22.	Cyanide (as Cn) mg/l, Max	<0.001	0.01	0.05
23.	Lead (As Pb) mg/l Max	<0.001	0.05	NR
24.	Zinc (as Zn) mg/l Max	0.56	0.05	NR
5.	Arionic detergents (as MBAS), mg/l, Max	0.00	5.0	15
6.	Chromium (as Cr+5) mg/l	0.01	0.2	1.0
7.	Mineral Oil mg/l, Max	0.01	0.05	NR -
8.	Residual, free chlorine mg/l, Min	AIII	0.01	NR
	The state of the s	NIL	0.2	1.0

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS - 10500 : 2012

NR- No Relaxation

Statement R&D Services

DHANBAD, 1. The test report refers only to the particular item(s) submitted for testing.

Technical Manager Aditi R&D Services, Sindri

- 2. The test results reported in this report are valid at the time of and under the stated condition of measurment.
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# Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015,ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608

### TEST REPORT OF DRINKING WATER FOR THE MONTH OF FEBRUARY 2024

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT				
ARDS/23-24/2059 Dt. 05/03/2024	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD				
P.O. NO. & Date	6000036592 & Date: 29.01.2024				
Season	POST MONSOON				
Location of Sample	KAN	NDRA ( CORE ZONE )	5		
Sample Description		GROUND WATER			
	OH CIT	Analysis Started on : 2	27/02/2024		
Date of Sample Collection	26/02/2024 Analysis completed on 04/03/202				
Test Procedure	IS:3025				
	TEST RESULT	THE WINDSHIP STORY			

	TEST	RESULT		
SI.	Parameters	Value	IS: 1050	0: 2012
No.			Accepted Limit	Permissible Limit
1.	Colour Hazen units	1	5	15
2.	Odour	Agreeable	Agreeable	Agreeable
3.	Taste	Agreeable	Agreeable	Agreeable
4.	Turbidity NTU Max	3.0	1 1	5
5.	Total Dissolved Solids mg/l, Max	804	500	2000
6.	pH Value	7.1	6.5 to 8.5	6.5 to 8.5
7.	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max	592.2	200	600
8.	Calcium (as Ca) mg/l, Max	173.0	75	200
9.	Magnesium (as Mg)mg/l, Max			
10.	Copper (as Cu) mg/l, Max	0.04	0.05	1.5
11.	Iron (as Fe) mg/l Max	0.06	1.0	NR
12.	Manganese (as Mn) mg/l, Max	<0.001	0.1	0.3
13.	Chlorides (as CI) mg/l, Max	138.66	250	1000
14.	Sulphate (as SO <sub>4</sub> ) mg/l Max	14.4	200	400
15.	Nitrate mg/l, (as NO <sub>3)</sub>	7.1	45	NR
16.	Fluoride (as F) mg/l	0.62	1.0	1.5
17.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max		0.001	0.002
18.	Mercury (as Hg)mg/l, Max		0.001	NR
19.	Cadmium (as Cd) mg/l, Max	41 14	0.01	NR
20.	Selenium (as Se mg/l, Max		0.01	NR
21.	Arsenic (as As) mg/l, Max	< 0.001	0.01	0.05
22.	Cyanide (as Cn) mg/l, Max	< 0.001	0.05	NR
23.	Lead (As Pb) mg/l Max	<0.001	0.05	NR
24.	Zinc (as Zn) mg/l Max	0.48	5.0	15
25.	Arionic detergents (as MBAS), mg/l, Max		0.2	1.0
26.	Chromium (as Cr+ <sup>6</sup> ) mg/l	0.009	0.05	NR
27.	Mineral Oil mg/l, Max		0.01	NR -
28.	Residual, free chlorine mg/l, Min	NIL	0.2	1.0

Remarks: All the parameters of samples tested are within the permissible limit of Drinking Water Standard IS - 10500 : 2012

NR- No Relaxation

Statementsditi R&D Services

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Technical Manager Aditi R&D Services, Sindri



# Testing Laboratory

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Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O)

Mobile: 09471358492, 09431512608

TEST REPORT OF SURFACE WATER FOR THE MONTH OF FEBRUARY 2024

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT				
ARDS/23-24/2065 Dt. 06/03/2024	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD				
P.O. NO. & Date	6000036592 & Date: 29.01.2024				
Season	POST MONSOON				
Location of Samp UPSTREAM OF DAI		Analysis Started on	28/02/2024		
Date & Time Sample Collection	Analysis completed on	05/03/2024			
Test Procedure	IS:3025				

	TEST RES	JLT	STATE OF THE PARTY
SI. No.	Parameters	Value	(IS :2296) Surface Water Class "C" Tolerance Limit
1.	Colour Hazen units	1	300
2.	Dissolved Oxygen, mg/l	5.3	4
3.	B.O.D. (3 days at 27°C)	1.7	3
4.	Total Dissolved Solids mg/l, Max	352	1500
5.	pH Value	8.1	6.5 - 8.5
6.	Conductivity (µs/CM)	540	
7.	Turbidity (NTU)	1.8	
8.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max	-	0.005
9.	Oil and grease, mg/l	BDL	0.1
10.	C.O.D., mg/l	29.9	
11.	Total Suspended Solids , mg/l	32	

Remarks: All the parameters of samples tested are within the permissible limit of General standard. BDL – Below Detection Limit

Sr. Chemist Aditi R&D Services



Technical Manager Aditi R&D Services, Sindri

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## **Testing Laboratory**

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Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107

Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O)

Mobile: 09471358492, 09431512608

TEST REPORT OF SURFACE WATER FOR THE MONTH OF FEBRUARY 2024

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT					
ARDS/23-24/2061 Dt. 05/03/2024	TASRA COAL MINING PROJECT, COLLIERIES DIVISION, STEEL AUTHORITY OF INDIA LTD. CHASNALLA – 828135, DIST DHANBAD					
P.O. NO. & Date	6000036592 & Date: 29.01.2024					
Season	POST MONSOON					
Location of DOWNSTREAM OF D	The state of the s	Analysis Started on	27/02/2024			
Date & Time Sample Collection	Collection 26/02/2024 Analysis completed on 04/03/2024					
Test Procedure	IS:3025					

	Test Procedure	IS:302	5
	TEST RES	ULT	
SI. No.	Parameters	Value	(IS :2296) Surface Water Class "C" Tolerance Limit
1.	Colour Hazen units	1	300
2.	Dissolved Oxygen, mg/l	5.1	4
3.	B.O.D. (3 days at 27°C)	1.9	3
4.	Total Dissolved Solids mg/l, Max	345	1500
5.	pH Value	8.2	6.5 + 8.5
6.	Conductivity (µS/cm)	530	
7.	Turbidity (NTU)	2.0	
8.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, Max		0.005
9.	Oil and grease, mg/l	BDL	0.1
10.	C.O.D., mg/l	22.5	
11.	Total Suspended Solids , mg/l	35	_

Remarks: All the parameters of samples tested are within the permissible limit of General standard. BDL – Below Detection Limit

Sr. Chemist Aditi R&D Services



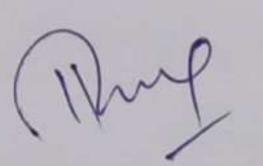
Technical Manager Aditi R&D Services, Sindri

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## Annexure-II

VI. COAL PRODUCTION AND WASTE EXCAVATION( O/B) DETAILS AND ENVIRONMENT STATEMENT FY 23-24).

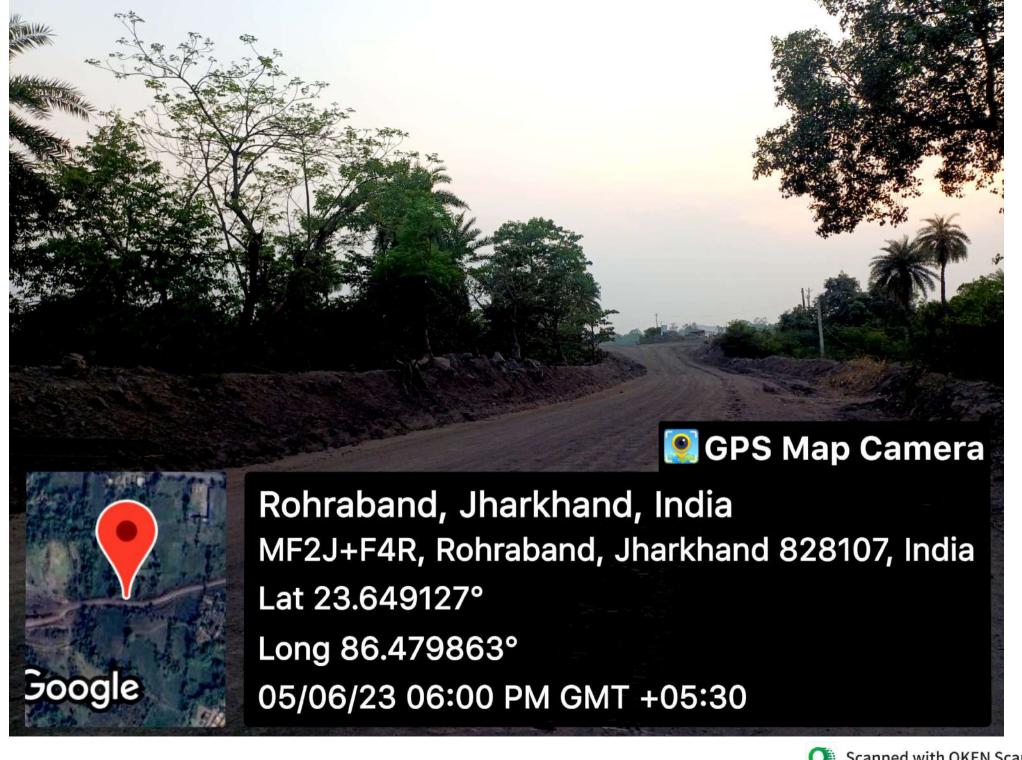
F/Y	2021-22		F/Y 202	2-23		F/Y	2023-24	
Month	production Coal(IN MT)	OB CUBIC METRE	Month	production Coal(IN MT)	OB CUBIC METRE	Month	production Coal(IN MT)	OB CUBIC
April'21	0.00	0	April'22	61514.66	209764.99	April'23	39571.911	134940.216
May'21	0.00	0	May'22	0.000	0	May'23	26627.460	90799.638
June,21	180.210	614.516	June,22	0.000	0	June,23	36798.203	125481.889
July'21	17573.030	59924.032	July'22	14912.370	50851.181	July'23	53069.230	180966.074
Aug'21	26629.910	9079776.31	Aug'22	27750.390	94628.829	Aug'23	62875.995	214407.142
Sep'21	35286.970	120328.567	Sep'22	29322.770	99990.645	Sep'23	Nil	Nil
Oct'21	23482.350	80074.813	Oct'22	29796.300	101605.383	Oct'23	Nil	Nil
Nov'21	35076.620	119611.274	Nov'22	38223.090	130340.736	Nov'23	Nil	Nil
Dec'21	54633.410	186299.928	Dec'22	29183.400	99515.394	Dec'23	Nil	Nil
Jan 22	52089.820	177626.286	Jan'23	27701.340	94461.569	Jan'24	Nil	
Feb'22	36904.530	125844.447	Feb'23	30807.920	105055.0072	Feb'24	853.570	Nil ,
Mar'22	58370.410	199043.098	Mar'23	13299.890	45352.624	Mar'24		2910.673
TOTAL ,	340227.260	10149143.27	TOTAL	302512.13	1031566,358	Total	113520.200 333316.569	749505.632





World Environment Day June 5th 2023







## **Monitoring Locations**



Longitude: 86°29'13.39"E Elevation: 186±4m Accuracy: 3.9m Time: 08-10-2023 11:30 Note:L Type Quarter

**Air Monitoring Locations** 

**Air Monitoring Locations** 



**Air Monitoring Locations** 



**Air Monitoring Locations** 



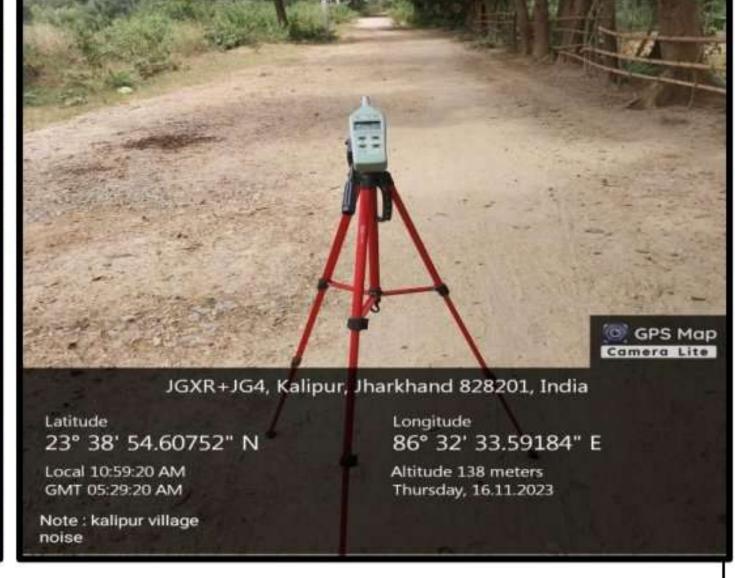


# **Noise Monitoring Locations**

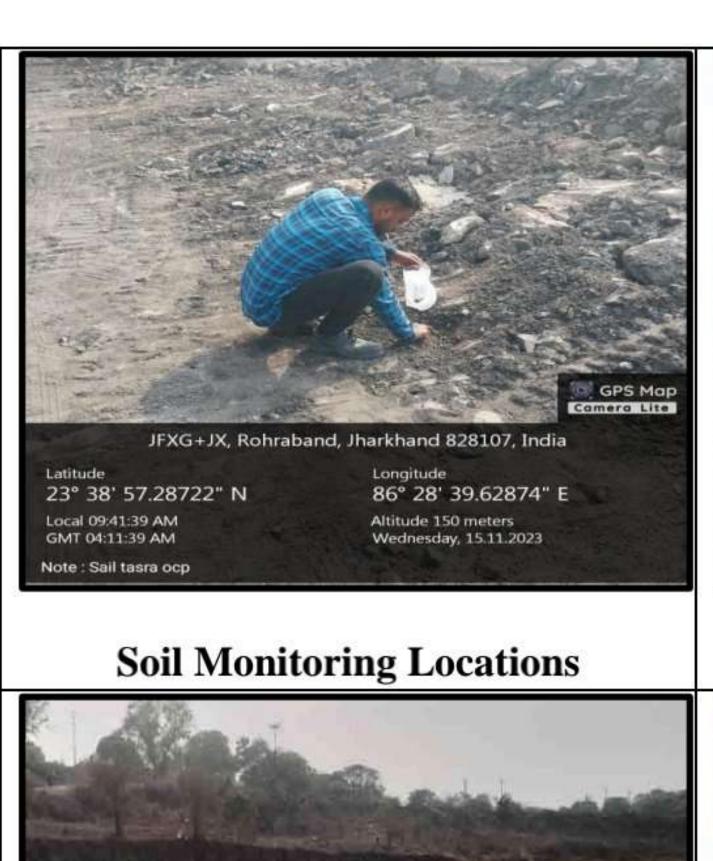
**Noise Monitoring Locations** 



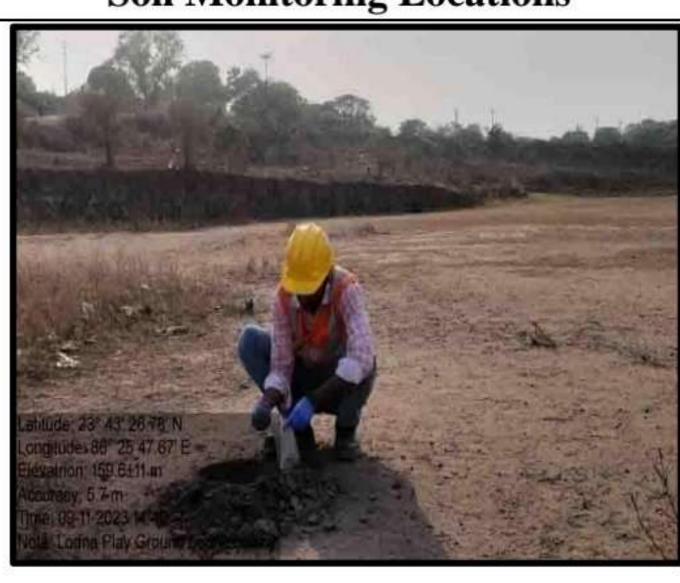
**Noise Monitoring Locations** 



**Noise Monitoring Locations** 









**Soil Monitoring Locations** 

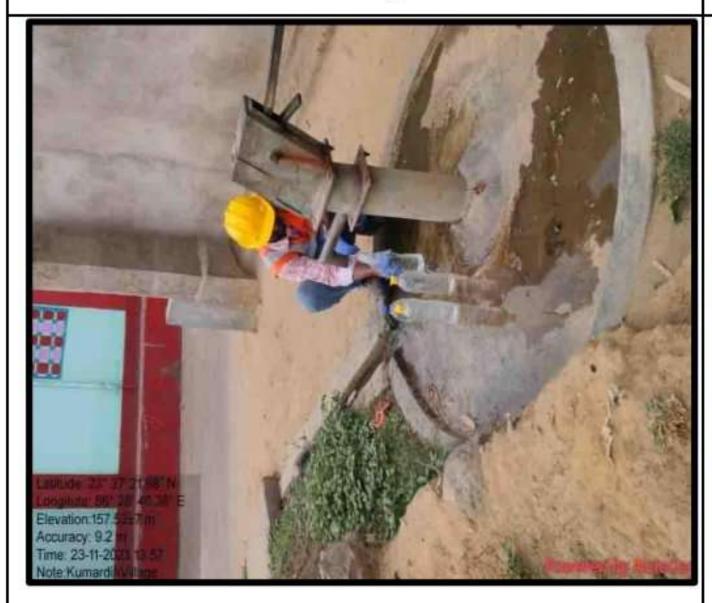
**Soil Monitoring Locations** 



**GW Monitoring Locations** 



**GW Monitoring Locations** 



**GW Monitoring Locations** 



**GW Monitoring Locations** 

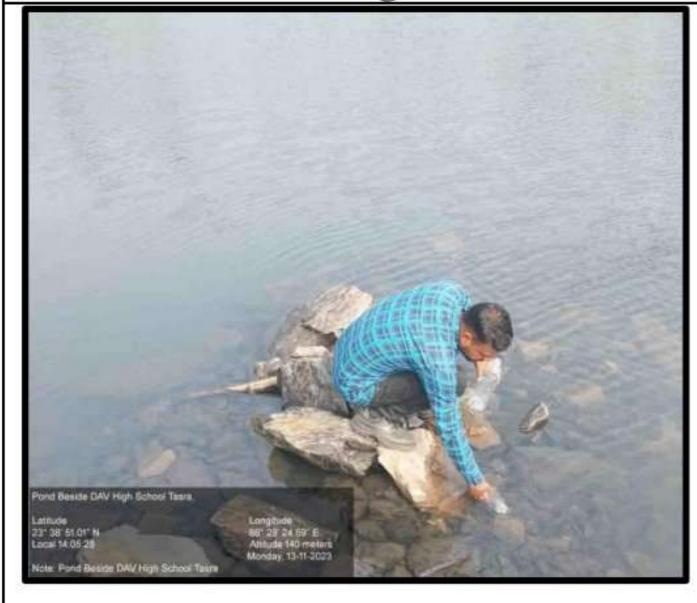


Unnamed Road, Jharkhand 828107, India

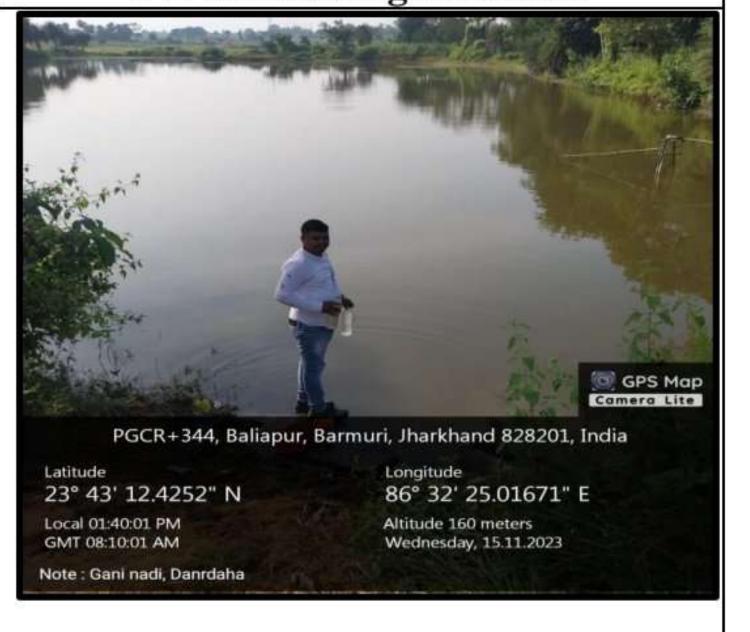
Latitude
23° 38' 25.81649" N
Local 10:24:08 AM
GMT 04:54:08 AM
GMT 04:54:08 AM
Note: Downstream damodar river

**SW Monitoring Locations** 

**SW Monitoring Locations** 



**SW Monitoring Locations** 



**SW Monitoring Locations**