

**BEFORE THE NATIONAL GREEN TRIBUNAL  
EASTERN ZONE KOLKATA BENCH  
Original Application No.43 of 2024/EZ.**

Akash Kalo ..... Petitioner / Appellant

Vs.

M/s. JSW Bhushan Power and  
Steel Limited & Ors. ....Respondent / Defendant

**INDEX**

Sl. No.	Description of the documents	Page Nos.
1.	Supplementary Affidavit.	2-5
2.	<b><u>ANNEXURE-R3/5 Colly</u></b> Photocopy the reply dtd.27.12.2024 of the R-1 unit in response to the show cause notice dtd.21.10.2024 issued by the R-3 Board.	6-18
3.	<b><u>ANNEXURE-R3/6</u></b> Photocopy of the Inspection Report carried out on dtd.06.01.2025.	19-21

SPCB Odisha, R.No.3

Through

*Papiya Banerjee Bihani*

Kolkata

Date:

**Smt Papiya Banerjee Bihani,**  
Advocates for the Respondent No.3  
(State Pollution Control Board, Odisha)  
e-mail: pbanerjeebihani@gmail.com  
Phone No.:9831493390

**BEFORE THE NATIONAL GREEN TRIBUNAL  
EASTERN ZONE KOLKATA BENCH**

**Original Application No.43 of 2024/EZ.**

25 FEB 2025

**Akash Kalo** ..... Petitioner / Appellant

**Vs.**

**M/s. JSW Bhushan Power and Steel Limited & Ors.** .....Respondent / Defendant

**SUPPLEMENTARY AFFIDAVIT ON BEHALF OF  
STATE POLLUTION CONTROL BOARD,  
RESPONDENT NO.3 IN COMPLIANCE TO ORDER  
DTD.08.01.2025 OF THIS HON'BLE TRIBUNAL.**



I, Dr. Kailasam Murugesan, IFS, son of late Paramasivam Kailasam aged around 56 years, at present working as Member Secretary, State Pollution Control Board, having my office at Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, P.O. Nayapalli, Bhubaneswar, Dist – Khurda, Odisha-751012, do hereby

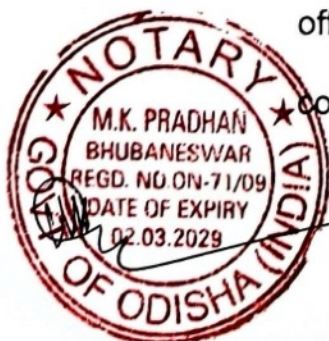
solemnly affirm and state as under:



MANJULA KUMAR PRADHAN  
 NOTARY PUBLIC  
 BHUBANESWAR  
 REGD NO ON-71/2009  
 PH -9437627119 (M)



1. That I am the Member Secretary of the Respondent No.3 Board and, as such, am well-acquainted with the facts and circumstances with the case and competent to swear this affidavit.
2. That this Hon'ble Tribunal in their order dtd.08.01.2025 after taking into consideration the Additional Affidavit dtd.21.10.2024 filed by the R-3 Board wherein the show cause notice No.16756 dtd.21.10.2024 has been annexed as Annexure-R3/4 has been pleased to direct the R-3 Board to file supplementary affidavit showing the current status.
3. That in compliance to the aforesaid direction, it is humbly submitted that in response to the show cause notice dtd.21.10.2024, the R-1 unit has submitted the reply dtd.27.12.2024 indicating the compliance status. A copy of the reply dtd.27.12.2024 of the unit is annexed to this affidavit and marked as **ANNEXURE – R3/5 Colly.**
4. That the R-3 Board has also carried out inspection through its officials of Regional Office at Sambalpur to verify the compliance status of the unit on dtd.06.01.2025 and the



✘

**MANJULA KUMAR PRADHAN**  
 NOTARY PUBLIC  
 BHUBANESWAR  
 REGD NO ON-71/2009  
 PH -9437627119 (M)

report reveals that the R-1 unit has taken steps for removal of the defects pointed out in the show cause notice. Copy of the inspection report is annexed to this affidavit and marked as **ANNEXURE – R3/6**.

5. That this affidavit is filed in compliance to direction dtd.08.01.2025 of this Hon'ble Tribunal.
6. That the Respondent No.3 Board craves the leave of this Hon'ble Tribunal to file further affidavit if necessary for proper adjudication of the case.
7. That the annexures annexed to the present affidavit are true and correct copies of their originals.
8. That the contents of the above paragraphs are true and correct to the best of my knowledge, as derived from the official records, and that nothing material has been concealed therefrom.



  
**DEPONENT**  
 Member Secretary  
 State Pollution Control Board  
 Odisha, Bhubaneswar

X

MANJULA KUMAR PRADHAN  
NOTARY PUBLIC  
BHUBANESWAR  
REGD NO ON-71/2009  
PH -9437627119 (M)

**VERIFICATION:**

I, the above named deponent, do hereby verify that the contents of the above affidavit are true and correct to the best of my knowledge, as derived from official records, and that nothing material has been concealed therefrom.

Verified at Bhubaneswar on this the 25<sup>th</sup> day of February, 2025.

**SWORN BEFORE ME**



MANJULA KUMAR PRADHAN  
NOTARY PUBLIC  
BHUBANESWAR  
REGD NO ON-71/2009  
PH -9437627119

**DEPONENT**  
Member Secretary  
State Pollution Control Board  
Odisha, Bhubaneswar



**Bhushan Power & Steel Limited**  
(A JSW Group Company)  
Village : Thekoloi, Post : Lapanga, Teh. : Rengali  
Dist. : Sambalpur - 768 212, Odisha, INDIA  
T +91(0)663 6636000  
Website : [www.jsw.in](http://www.jsw.in), CIN : U27100DL1999PLC108350



JSWBPSL/ENV/24-25/074  
27<sup>th</sup> December 2024.

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

Subject-Status of Compliance to the Show cause notice u/s.21 & 31A of the Air (PCP) act, 1981 and 23 & 33A of Water (PCP) Act, 1974 Amendments there under.

Reference-Your Letter No-16756/IND-I-CON-4650, Dated.21.10.2024.

Our letter No-JSWBPSL/ENV/24-25/059. Dated.22.10.2024

Dear Sir,

Pursuant to our reply dated 22.10.2024, we are pleased to submit a point-wise compliance status report addressing the recommendations contained in your Letter No-16756/IND-I-CON-4650, Dated.21.10.2024 as follows:

Sl. No	Recommendation	Compliance Status
a	The embankment of tailing pond facing the Pond of village Bisadihi was not stone pitched, and no work has been commenced for stone pitching till date	The embankment of the tailing pond facing towards the Bisadihi village stone pitching work completed photographs is enclosed as <b>Annexure-1</b> for your kind reference.
b	You have not submitted periodic monitoring report of ground water, pond and dug well and tube well of the alleged village as well as ambient air quality monitoring at the dump site and the report shall be submitted to the Board.	We have engaged Visiontek Consultancy Services Pvt. Limited a NABL, MOEF&CC accredited Laboratory for monitoring of ground water, pond and tube well of the alleged village as well as ambient air quality monitoring at the dump site. Copy of the recent report is attached as <b>Annexure-2</b>
c	You have not yet carried out plantation activity besides the tailing pond towards the Bisadihi village.	We have planted total 1000 nos. saplings in tailing pond area. The photographs plantation done is enclosed as <b>Annexure-3</b> .
d	You have not yet Engage a third party to study the environmental	As per board's advise, we have already engaged third party (The chemistry

Handwritten notes: AEC, 30/12/24, and initials.

	impact of the iron ore tailing pond around a 10 KM radius of the tailing Pond in consultation with the state pollution Control Board.	department of Veer Surendra Sai University of Technology (VSSUT) to study the environmental impact of the iron ore tailing pond around a 10 KM radius of the tailing Pond. The study has been completed, and report is under preparation, it will submit at your good office at the first week of January25.
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We are pleased to confirm that we have now complied with all the recommendations outlined in your Letter No-16756/IND-I-CON-4650, Dated.21.10.2024. Furthermore, we remain committed to improving environmental conditions and fostering sustainable development. We assure you of our dedication to adhering to all the stipulations set forth in the directives provided.

Thanking You,

Yours's faithfully,

For **Bhushan Power & Steel Limited**



**Anil Kumar Singh**  
**President &WTD**

✓ Copy to: The Regional Officer, Odisha State Pollution Control Board, Sambalpur

## Annexure-1

Photographs of the stone pitching work at tailing pond towards Bisadihi village.



# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

(ISO 9001:2015, ISO 14001:2015, ISO 45001:2018(OH&S), ISO/IEC 17025:2017 Certified)

## TEST REPORT

ULR No: TC794424000001551F

Date: 09.12.2024

Name & Address of the Customer	:	<b>M/s Bhusan Power &amp; Steel Limited, Sambalpur, Odisha-768210 (A JSW Group Company)</b>			
Sample Code	:	<b>VCSPL/ENV/031224/004</b>	Date of Sampling	:	<b>22.11.2024</b>
Sampling plan reference No.	:	4500201422/29.11.2024	Sample Received on	:	<b>23.11.2024</b>
Sample Description	:	<b>Ground Water</b>	Sampling Procedure	:	VCSPL/F-SOP/003
Identification by Customer	:	<b>GW-2</b>	Sampling Location	:	<b>Bishidihi Village</b>
Environment Condition	:	Atmospheric Temp.: 26 - 36°C Barometric Pressure: 750 mm of Hg	Coordinates	:	<b>Lat: 21.759505 N Long: 84.041856 E</b>
Sample Condition	:	Ice Preserved	Sampling done by	:	Mr. Shrikant Das Mistry
Test Started on	:	<b>23.11.2024</b>	Test Completed on	:	<b>29.11.2024</b>

### 1. Chemical Testing A. Water

Sl.No	Parameters	Unit	Testing methods	Standard as per IS 10500: 2012 Amend 2021		Results
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	APHA 23 <sup>rd</sup> Edition 2120 B, C: 2017	5	15	<5.0
2	pH	--	APHA 23 <sup>rd</sup> Edition 4500 H+B: 2017	6.5 - 8.5	No Relaxation	7.34
3	Turbidity	NTU, max	APHA 23 <sup>rd</sup> Edition 2130 B: 2017	1	5	1.3
4	Total Dissolve solids	mg/l, max	APHA 23 <sup>rd</sup> Edition 2540 C: 2017	500	2000	376
5	Total Hardness (as CaCO <sub>3</sub> )	µS/cm	APHA 23 <sup>rd</sup> Edition 2510 C: 2017	200	600	191
6	Iron (as Fe)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	1.0	No Relaxation	BLQ (<0.1)
7	Chloride (as Cl)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500Cl- B: 2017	250	1000	81.1
8	Free Residual Chlorine	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.2	1	BLQ (<0.2)
9	Fluoride (as F)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500F-C: 2017	1.0	1.5	<0.2
10	Calcium (as Ca)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500Cl B: 2017	75	200	43.1
11	Magnesium (as Mg)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3500 Mg B: 2017	30	100	20.3
12	Copper (as Cu)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	0.05	1.5	BLQ (<0.05)
13	Sulphate (as SO <sub>4</sub> )	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500 SO <sub>4</sub> E: 2017	200	400	13.8
14	Nitrate (as NO <sub>3</sub> )	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500 NO <sub>3</sub> B: 2017	45	No Relaxation	3.54
15	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, max	APHA 23 <sup>rd</sup> Edition 5530 B D: 2017	0.001	0.002	BLQ (<0.001)
16	Mercury (as Hg)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3112 B: 2017	0.001	No Relaxation	BLQ (<0.004)
17	Cadmium (as Cd)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	0.003	No Relaxation	BLQ (<0.03)
18	Selenium (as Se)	mg/l, max	APHA 23 <sup>rd</sup> Edition 2320 B: 2017	0.01	No Relaxation	BLQ (<0.001)
19	Arsenic (as As)	mg/l, max	APHA 23 <sup>rd</sup> Edition 2340 C: 2017	0.01	No Relaxation	BLQ (<0.004)
20	Cyanide (as CN)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.05	No Relaxation	BLQ (<0.02)
21	Lead (as Pb)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.01	No Relaxation	BLQ (<0.01)
22	Zinc (as Zn)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	5	15	BLQ (<0.03)
23	Anionic Detergents (as MBAS)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.2	1.0	BLQ (<0.5)
24	Total Chromium (as Cr)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3500 Hg: 2017	0.05	No Relaxation	BLQ (<0.1)
25	Total Alkalinity (as CaCO <sub>3</sub> )	mg/l, max	APHA 23 <sup>rd</sup> Edition 2320 B: 2017	200	600	113
26	Aluminum (as Al)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3500 Al B: 2017	0.03	0.2	BLQ (<0.03)
27	Boron (as B)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500 B B: 2017	0.5	2.4	BLQ (<0.1)

Reviewed by  
**Abhuri Sivaramayya**  
(Assistant Manager)



Approved by  
**Soumendrananjit Biswal**  
(Authorized Signatory)



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# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

(ISO 9001:2015, ISO 14001:2015, ISO 45001:2018(OH&S), ISO/IEC 17025:2017 Certified)



## TEST REPORT

ULR No: TC794424000001556F

Date: 09.12.2024

Name & Address of the Customer	:	M/s Bhusan Power & Steel Limited, Sambalpur, Odisha-768210 (A JSW Group Company)		
Sample Code	:	VCSPL/ENV/031224/009	Date of Sampling	: 22.11.2024
Sampling plan reference No.	:	4500201422/29.11.2024	Sample Received on	: 23.11.2024
Sample Description	:	Ground Water	Sampling Procedure	: VCSPL/F-SOP/003
Identification by Customer	:	GW-7	Sampling Location	: Sripura Village
Environment Condition	:	Atmospheric Temp.: 26 - 36°C Barometric Pressure: 750 mm of Hg	Coordinates	: Lat: 21.76451 N Long: 84.025499 E
Sample Condition	:	Ice Preserved	Sampling done by	: Mr. Shrikant Das Mistry
Test Started on	:	23.11.2024	Test Completed on	: 29.11.2024

### 1. Chemical Testing A. Water

Sl.No	Parameters	Unit	Testing methods	Standard as per IS 10500: 2012 Amend 2021		Results
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	APHA 23 <sup>rd</sup> Edition 2120 B, C: 2017	5	15	<5.0
2	pH	--	APHA 23 <sup>rd</sup> Edition 4500 H+B: 2017	6.5 - 8.5	No Relaxation	7.62
3	Turbidity	NTU, max	APHA 23 <sup>rd</sup> Edition 2130 B: 2017	1	5	<1.0
4	Total dissolve solids	mg/l, max	APHA 23 <sup>rd</sup> Edition 2540 C: 2017	500	2000	352
5	Total Hardness (as CaCO <sub>3</sub> )	µS/cm	APHA 23 <sup>rd</sup> Edition 2510 C: 2017	200	600	150
6	Iron (as Fe)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	1.0	No Relaxation	BLQ (<0.1)
7	Chloride (as Cl)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500Cl- B: 2017	250	1000	44.2
8	Free Residual Chlorine	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.2	1	BLQ (<0.2)
9	Fluoride (as F)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500F-C: 2017	1.0	1.5	0.96
10	Calcium (as Ca)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500Cl B: 2017	75	200	44.9
11	Magnesium (as Mg)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3500 Mg B: 2017	30	100	9.09
12	Copper (as Cu)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	0.05	1.5	BLQ (<0.05)
13	Sulphate (as SO <sub>4</sub> )	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500 SO <sub>4</sub> E: 2017	200	400	16.5
14	Nitrate (as NO <sub>3</sub> )	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500 NO <sub>3</sub> B: 2017	45	No Relaxation	13.7
15	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, max	APHA 23 <sup>rd</sup> Edition 5530 B D: 2017	0.001	0.002	BLQ (<0.001)
16	Mercury (as Hg)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3112 B: 2017	0.001	No Relaxation	BLQ (<0.004)
17	Cadmium (as Cd)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	0.003	No Relaxation	BLQ (<0.03)
18	Selenium (as Se)	mg/l, max	APHA 23 <sup>rd</sup> Edition 2320 B: 2017	0.01	No Relaxation	BLQ (<0.001)
19	Arsenic (as As)	mg/l, max	APHA 23 <sup>rd</sup> Edition 2340 C: 2017	0.01	No Relaxation	BLQ (<0.004)
20	Cyanide (as CN)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.05	No Relaxation	BLQ (<0.02)
21	Lead (as Pb)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.01	No Relaxation	BLQ (<0.01)
22	Zinc (as Zn)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	5	15	BLQ (<0.03)
23	Anionic Detergents (as MBAS)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.2	1.0	BLQ (<0.5)
24	Total Chromium (as Cr)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3500 Hg: 2017	0.05	No Relaxation	BLQ (<0.1)
25	Total Alkalinity (as CaCO <sub>3</sub> )	mg/l, max	APHA 23 <sup>rd</sup> Edition 2320 B: 2017	200	600	174
26	Aluminum (as Al)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3500 Al B: 2017	0.03	0.2	BLQ (<0.03)
27	Boron (as B)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500 B B: 2017	0.5	2.4	BLQ (<0.1)

Reviewed by  
Abhuri Sivarama  
(Assistant Manager)

Approved by  
Soumendrananjit Biswal  
(Authorized Signatory)

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- Decision rule applied whenever the requirements/specification provided by customers/standard requirement.



# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

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## TEST REPORT

ULR No: TC794424000001557F

Date: 09.12.2024

Name & Address of the Customer	:	<b>M/s Bhusan Power &amp; Steel Limited, Sambalpur, Odisha-768210</b> (A JSW Group Company)			
Sample Code	:	<b>VCSPL/ENV/031224/010</b>	Date of Sampling	:	<b>22.11.2024</b>
Sampling plan reference No.	:	4500201422/29.11.2024	Sample Received on	:	<b>23.11.2024</b>
Sample Description	:	<b>Ground Water</b>	Sampling Procedure	:	VCSPL/F-SOP/003
Identification by Customer	:	<b>GW-8</b>	Sampling Location	:	<b>Trailing Pond borewell</b>
Environment Condition	:	Atmospheric Temp.: 26 - 36°C Barometric Pressure: 750 mm of Hg	Coordinates	:	<b>Lat: 21.760504 N</b> <b>Long: 84.036686 E</b>
Sample Condition	:	Ice Preserved	Sampling done by	:	Mr. Shrikant Das Mistry
Test Started on	:	<b>23.11.2024</b>	Test Completed on	:	<b>29.11.2024</b>

### 1. Chemical Testing

#### A. Water

Sl.No	Parameters	Unit	Testing methods	Standard as per IS 10500: 2012 Amend 2021		Results
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	APHA 23 <sup>rd</sup> Edition 2120 B, C: 2017	5	15	<5.0
2	pH	--	APHA 23 <sup>rd</sup> Edition 4500 H+B: 2017	6.5 - 8.5	No Relaxation	6.63
3	Turbidity	NTU, max	APHA 23 <sup>rd</sup> Edition 2130 B: 2017	1	5	<1.0
4	Total dissolve solids	mg/l, max	APHA 23 <sup>rd</sup> Edition 2540 C: 2017	500	2000	398
5	Total Hardness (as CaCO <sub>3</sub> )	µS/cm	APHA 23 <sup>rd</sup> Edition 2510 C: 2017	200	600	176
6	Iron (as Fe)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	1.0	No Relaxation	BLQ (<0.1)
7	Chloride (as Cl)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500Cl- B: 2017	250	1000	232
8	Free Residual Chlorine	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.2	1	BLQ (<0.2)
9	Fluoride (as F)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500F-C: 2017	1.0	1.5	<0.2
10	Calcium (as Ca)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500Cl B: 2017	75	200	50.2
11	Magnesium (as Mg)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3500 Mg B: 2017	30	100	12.3
12	Copper (as Cu)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	0.05	1.5	BLQ (<0.05)
13	Sulphate (as SO <sub>4</sub> )	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500 SO <sub>4</sub> E: 2017	200	400	1.93
14	Nitrate (as NO <sub>3</sub> )	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500 NO <sub>3</sub> B: 2017	45	No Relaxation	11.1
15	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, max	APHA 23 <sup>rd</sup> Edition 5530 B D: 2017	0.001	0.002	BLQ (<0.001)
16	Mercury (as Hg)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3112 B: 2017	0.001	No Relaxation	BLQ (<0.004)
17	Cadmium (as Cd)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	0.003	No Relaxation	BLQ (<0.03)
18	Selenium (as Se)	mg/l, max	APHA 23 <sup>rd</sup> Edition 2320 B: 2017	0.01	No Relaxation	BLQ (<0.001)
19	Arsenic (as As)	mg/l, max	APHA 23 <sup>rd</sup> Edition 2340 C: 2017	0.01	No Relaxation	BLQ (<0.004)
20	Cyanide (as CN)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.05	No Relaxation	BLQ (<0.02)
21	Lead (as Pb)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.01	No Relaxation	BLQ (<0.01)
22	Zinc (as Zn)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	5	15	BLQ (<0.03)
23	Anionic Detergents (as MBAS)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.2	1.0	BLQ (<0.5)
24	Total Chromium (as Cr)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3500 Hg: 2017	0.05	No Relaxation	BLQ (<0.1)
25	Total Alkalinity (as CaCO <sub>3</sub> )	mg/l, max	APHA 23 <sup>rd</sup> Edition 2320 B: 2017	200	600	39.1
26	Aluminum (as Al)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3500 Al B: 2017	0.03	0.2	BLQ (<0.03)
27	Boron (as B)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500 B B: 2017	0.5	2.4	BLQ (<0.1)

Reviewed by  
  
**Abburi Sivaramayya**  
 (Assistant Manager)

Approved by  
  
**Soumendranath Manajit Biswal**  
 (Authorized Signatory)

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## TEST REPORT

ULR No: TC794424000001558F

Date: 09.12.2024

Name & Address of the Customer	:	<b>M/s Bhusan Power &amp; Steel Limited, Sambalpur, Odisha-768210</b> (A JSW Group Company)		
Sample Code	:	<b>VCSPL/ENV/031224/011</b>	Date of Sampling	: <b>22.11.2024</b>
Sampling plan reference No.	:	4500201422/29.11.2024	Sample Received on	: <b>23.11.2024</b>
Sample Description	:	<b>Ground Water</b>	Sampling Procedure	: VCSPL/F-SOP/003
Identification by Customer	:	<b>GW-9</b>	Sampling Location	: <b>Trailing Pond hand pump</b>
Environment Condition	:	Atmospheric Temp.: 26 - 36°C Barometric Pressure: 750 mm of Hg	Coordinates	: <b>Lat: 21.76451 N Long: 84.025499 E</b>
Sample Condition	:	Ice Preserved	Sampling done by	: Mr. Shrikant Das Mistry
Test Started on	:	<b>23.11.2024</b>	Test Completed on	: <b>29.11.2024</b>

### 1. Chemical Testing A. Water

Sl.No	Parameters	Unit	Testing methods	Standard as per IS 10500: 2012 Amend 2021		Results
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	APHA 23 <sup>rd</sup> Edition 2120 B, C: 2017	5	15	<5.0
2	pH	--	APHA 23 <sup>rd</sup> Edition 4500 H+B: 2017	6.5 - 8.5	No Relaxation	7.42
3	Turbidity	NTU, max	APHA 23 <sup>rd</sup> Edition 2130 B: 2017	1	5	1.8
4	Total dissolve solids	mg/l, max	APHA 23 <sup>rd</sup> Edition 2540 C: 2017	500	2000	284
5	Total Hardness (as CaCO <sub>3</sub> )	µS/cm	APHA 23 <sup>rd</sup> Edition 2510 C: 2017	200	600	185
6	Iron (as Fe)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	1.0	No Relaxation	BLQ (<0.1)
7	Chloride (as Cl)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500Cl- B: 2017	250	1000	3.69
8	Free Residual Chlorine	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.2	1	BLQ (<0.2)
9	Fluoride (as F)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500F-C: 2017	1.0	1.5	<0.2
10	Calcium (as Ca)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500Cl B: 2017	75	200	37.0
11	Magnesium (as Mg)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3500 Mg B: 2017	30	100	22.5
12	Copper (as Cu)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	0.05	1.5	BLQ (<0.05)
13	Sulphate (as SO <sub>4</sub> )	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500 SO <sub>4</sub> E: 2017	200	400	3.96
14	Nitrate (as NO <sub>3</sub> )	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500 NO <sub>3</sub> B: 2017	45	No Relaxation	1.21
15	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, max	APHA 23 <sup>rd</sup> Edition 5530 B D: 2017	0.001	0.002	BLQ (<0.001)
16	Mercury (as Hg)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3112 B: 2017	0.001	No Relaxation	BLQ (<0.004)
17	Cadmium (as Cd)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	0.003	No Relaxation	BLQ (<0.03)
18	Selenium (as Se)	mg/l, max	APHA 23 <sup>rd</sup> Edition 2320 B: 2017	0.01	No Relaxation	BLQ (<0.001)
19	Arsenic (as As)	mg/l, max	APHA 23 <sup>rd</sup> Edition 2340 C: 2017	0.01	No Relaxation	BLQ (<0.004)
20	Cyanide (as CN)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.05	No Relaxation	BLQ (<0.02)
21	Lead (as Pb)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.01	No Relaxation	BLQ (<0.01)
22	Zinc (as Zn)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	5	15	BLQ (<0.03)
23	Anionic Detergents (as MBAS)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3111B, C: 2017	0.2	1.0	BLQ (<0.5)
24	Total Chromium (as Cr)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3500 Hg: 2017	0.05	No Relaxation	BLQ (<0.1)
25	Total Alkalinity (as CaCO <sub>3</sub> )	mg/l, max	APHA 23 <sup>rd</sup> Edition 2320 B: 2017	200	600	166.0
26	Aluminum (as Al)	mg/l, max	APHA 23 <sup>rd</sup> Edition 3500 Al B: 2017	0.03	0.2	BLQ (<0.03)
27	Boron (as B)	mg/l, max	APHA 23 <sup>rd</sup> Edition 4500 B B: 2017	0.5	2.4	BLQ (<0.1)

Reviewed by  
**Abhuri Sivaramayya**  
(Assistant Manager)

Approved by  
**Soumendra manajit Biswal**  
(Authorized Signatory)

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## TEST REPORT

ULR No: TC794424000001543F

Date: 09.12.2024

Name & Address of the Customer	M/s Bhusan Power & Steel Limited, Sambalpur, Odisha-768210 (A JSW Group Company)		
Sample Code	VCSPL/ENV/041224/008	Date of Sampling	22.11.2024
		Sample Received on	23.11.2024
Sample Description	Surface Water	Sampling Procedure	VCSPL/F-SOP/003
Identification by Customer	SW-2	Sampling Location	Sripura Village (Pond)
Sample Condition	Ice Preserved	Sampling done by	Mr. Shrikant Das Mistry
Sampling Coordinates	Lat: 21.765408 N	Sampling Plan ref. no.	4500201422/29.11.2024
	Long: 84.038712 E		
Test Started on	23.11.2024	Test Completed on	30.11.2024

### I. Chemical Testing

#### A. Water

Sl. No	Parameter	Unit	Testing Methods	Standard As per IS:2296 (Class-C)	Analysis Result
1	Colour	Hazen	APHA 23 <sup>rd</sup> Edition 2120B	300 (Max)	10
2	Turbidity	NTU	APHA 23 <sup>rd</sup> Edition 2130 B	--	BLQ (<1.0)
3	pH at 25°C	-	APHA 23 <sup>rd</sup> Edition 4500 H+B	6.5-8.5	7.34
4	Electrical Conductivity (at 25°C)	µg/cm	APHA 23 <sup>rd</sup> Edition 2510C: 2017	--	385
5	Total Dissolve Solids (TDS)	mg/l	APHA 23 <sup>rd</sup> Edition 2540 C	1500 (Max)	264
6	Total Hardness as CaCO <sub>3</sub>	mg/l	APHA 23 <sup>rd</sup> Edition 2340 C:2017	--	128
7	Total Alkalinity as CaCO <sub>3</sub>	mg/l	APHA 23 <sup>rd</sup> Edition 2320 B :2017	--	36.9
8	Chloride (as Cl)	mg/l	APHA 23 <sup>rd</sup> Edition 4500 Cl- B: 2017	600 (Max)	73.7
9	Sulphate (as SO <sub>4</sub> )	mg/l	APHA 23 <sup>rd</sup> Edition 4500 SO <sub>4</sub> - E: 2017	400 (Max)	6.41
10	Hexavalent Chromium (as Cr <sup>VI</sup> )	mg/l	APHA 23 <sup>rd</sup> Edition 3500 Cr B: 2017	0.05 (Max)	BLQ (<0.1)
11	Nitrate (as NO <sub>3</sub> )	mg/l	APHA 23 <sup>rd</sup> Edition 4500 NO <sub>3</sub> - B: 2017	50 (Max)	BLQ (<0.5)
12	Fluoride (as F)	mg/l	APHA 23 <sup>rd</sup> Edition 4500 F- C, D: 2017	1.5 (Max)	1.07
13	Calcium (as Ca)	mg/l	APHA 23 <sup>rd</sup> Edition 3500 Ca-B: 2017	--	31.7
14	Magnesium as Mg	mg/l	APHA 23 <sup>rd</sup> Edition 3500 Mg-B: 2017	--	11.8
15	Chemical Oxygen Demand (as COD)	mg/l	APHA 23 <sup>rd</sup> Edition 5220 B: 2017	--	3.98
16	Biochemical Oxygen Demand (BOD at 27°C For 3 days)	mg/l	IS3025 (P-44): 2019	3.0 (Max)	BLQ (<2.0)
17	Free Ammonia (as NH <sub>3</sub> )	mg/l	By Calculation	--	ND
18	Cyanide (as CN)	mg/l	APHA 23 <sup>rd</sup> Edition 4500 CN-C, E: 2017	0.05 (Max)	BLQ (<0.02)
19	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	APHA 23 <sup>rd</sup> Edition 5530 B,D : 2017	0.005 (Max)	BLQ (<0.001)
<b>B. Toxic Substance</b>					
20	Copper (as Cu)	mg/l	APHA 23 <sup>rd</sup> Edition 3111 B : 2017	1.50 (Max)	BLQ (<0.05)
21	Iron (as Fe)	mg/l	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	50 (Max)	BLQ (<0.15)
22	Manganese (as Mn)	mg/l	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	--	BLQ (<0.05)
23	Total Arsenic (as As)	mg/l	APHA 23 <sup>rd</sup> Edition 3500 As: 2017	0.2 (Max)	BLQ (<0.004)
24	Mercury (as Hg)	mg/l	APHA 23 <sup>rd</sup> Edition 3112 B: 2017	--	BLQ (<0.004)
25	Cadmium (as Cd)	mg/l	APHA 23 <sup>rd</sup> Edition B: 2017: 2017	0.01 (Max)	BLQ (<0.03)
26	Selenium (as Se)	mg/l	APHA 23 <sup>rd</sup> Edition 3500 Se C: 2017	0.05 (Max)	BLQ (<0.001)
<b>C. Biological Testing</b>					
	Total Coliform (as TC)	Per 100 ml	IS 15185: 2016	5000	Absent

Reviewed by  
Abhuri Sivarama  
(Assistant Manager)

Approved by  
Soumendra manajit Biswal  
(Authorized Signatory)

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## TEST REPORT

ULR No: TC794424000001544F

Date: 09.12.2024

Name & Address of the Customer	<b>M/s Bhusan Power &amp; Steel Limited, Sambalpur, Odisha-768210</b> (A JSW Group Company)		
Sample Code	<b>VCSPL/ENV/041224/009</b>	Date of Sampling	<b>30.11.2024</b>
Sample Description	<b>Surface Water</b>	Sample Received on	<b>02.12.2024</b>
Identification by Customer	<b>SW-3</b>	Sampling Procedure	VCSPL/F-SOP/003
Sample Condition	Ice Preserved	Sampling Location	<b>Bishdih Village (pond)</b>
Sampling Coordinates	<b>Lat: 21.762102 N</b> <b>Long: 84.039878 E</b>	Sampling done by	Mr. Shrikant Das Mistry
Test Started on	<b>02.12.2024</b>	Sampling Plan ref. no.	4500201422/29.11.2024
		Test Completed on	<b>07.12.2024</b>

### 1. Chemical Testing

#### A. Water

Sl. No	Parameter	Unit	Testing Methods	Standard As per IS:2296 (Class-C)	Analysis Result
1	Colour	Hazen	APHA 23 <sup>rd</sup> Edition 2120B	<b>300 (Max)</b>	15
2	Turbidity	NTU	APHA 23 <sup>rd</sup> Edition 2130 B	--	3.23
3	pH at 25°C	-	APHA 23 <sup>rd</sup> Edition 4500 H+B	<b>6.5-8.5</b>	7.63
4	Electrical Conductivity (at 25°C)	µg/cm	APHA 23 Edition 2510C: 2017	--	743
5	Total Dissolve Solids (TDS)	mg/l	APHA 23 <sup>rd</sup> Edition 2540 C	<b>1500 (Max)</b>	320
6	Total Hardness as CaCO <sub>3</sub>	mg/l	APHA 23 Edition 2340 C:2017	--	167
7	Total Alkalinity as CaCO <sub>3</sub>	mg/l	APHA 23 Edition 2320 B: 2017	--	109
8	Chloride (as Cl)	mg/l	APHA 23 <sup>rd</sup> Edition 4500 Cl- B: 2017	<b>600 (Max)</b>	62.7
9	Sulphate (as SO <sub>4</sub> )	mg/l	APHA 23 <sup>rd</sup> Edition 4500 SO <sub>4</sub> - E: 2017	<b>400 (Max)</b>	8.88
10	Hexavalent Chromium (as Cr <sup>VI</sup> )	mg/l	APHA 23 <sup>rd</sup> Edition 3500 Cr B: 2017	<b>0.05 (Max)</b>	BLQ (<0.1)
11	Nitrate (as NO <sub>3</sub> )	mg/l	APHA 23 <sup>rd</sup> Edition 4500 NO <sub>3</sub> - B: 2017	<b>50 (Max)</b>	BLQ (<0.5)
12	Fluoride (as F)	mg/l	APHA 23 <sup>rd</sup> Edition 4500 F- C, D: 2017	<b>1.5 (Max)</b>	0.98
13	Calcium (as Ca)	mg/l	APHA 23 <sup>rd</sup> Edition 3500 Ca-B: 2017	--	37.0
14	Magnesium as Mg	mg/l	APHA 23 <sup>rd</sup> Edition 3500 Mg-B: 2017	--	18.2
15	Chemical Oxygen Demand (as COD)	mg/l	APHA 23 <sup>rd</sup> Edition 5220 B: 2017	--	7.97
16	Biochemical Oxygen Demand (BOD at 27°C For 3 days)	mg/l	IS3025 (P-44): 2019	<b>3.0 (Max)</b>	2.35
17	Free Ammonia (as NH <sub>3</sub> )	mg/l	By Calculation	--	ND
18	Cyanide (as CN)	mg/l	APHA 23 <sup>rd</sup> Edition 4500 CN-C, E: 2017	<b>0.05 (Max)</b>	BLQ (<0.02)
19	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	APHA 23 <sup>rd</sup> Edition 5530 B,D: 2017	<b>0.005 (Max)</b>	BLQ (<0.001)
<b>B. Toxic Substance</b>					
20	Copper (as Cu)	mg/l	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	<b>1.50 (Max)</b>	BLQ (<0.05)
21	Iron (as Fe)	mg/l	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	<b>50 (Max)</b>	BLQ (<0.15)
22	Manganese (as Mn)	mg/l	APHA 23 <sup>rd</sup> Edition 3111 B: 2017	--	BLQ (<0.05)
23	Total Arsenic (as As)	mg/l	APHA 23 <sup>rd</sup> Edition 3500 As: 2017	<b>0.2 (Max)</b>	BLQ (<0.004)
24	Mercury (as Hg)	mg/l	APHA 23 <sup>rd</sup> Edition 3112 B: 2017	--	BLQ (<0.004)
25	Cadmium (as Cd)	mg/l	APHA 23 <sup>rd</sup> Edition B: 2017: 2017	<b>0.01 (Max)</b>	BLQ (<0.03)
26	Selenium (as Se)	mg/l	APHA 23 <sup>rd</sup> Edition 3500 Se C: 2017	<b>0.05 (Max)</b>	BLQ (<0.001)
<b>C. Biological Testing: -</b>					
	Total Coliform (as TC)	Per 100 ml	IS 15185: 2016	<b>5000</b>	100

Reviewed by  
**Abburi Sivaramayya**  
(Assistant Manager)

Approved by  
**Soumenendra manajit Biswal**  
(Authorized Signatory)

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## TEST REPORT

ULR No: TC794424000001536F

Date: 09.12.2024

Name & Address of the Customer	: M/s Bhusan Power & Steel Limited, Sambalpur, Odisha-768210 (A JSW Group Company)
Sample Code	: VCSPL/ENV/041224/001
Date of Sampling	: 28.11.2024
Sample Received on	: 30.11.2024
Sample Description	: Ambient Air
Sampling Procedure	: VCSPL/F-SOP/001, Dt. 04.09.2021
Identification by Customer	: AAQMS-1
Sampling Location	: Trailing Pond
Environment Condition during Sampling	: Atmospheric Temp.: 26 - 36°C Barometric Pressure: 750 mm of Hg
Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550), VOC Sampler
Sample Condition	: Air Tight Sealed and gaseous Sample
Sampling done by	: Mr. Shrikant Das Mistry
Sampling plan reference No.	: 4500201422/29.11.2024
Sampling Coordinates	: Lat: 21.763642 N Long: 84.028473 E
Test Started on	: 30.11.2024
Test Completed on	: 06.12.2024

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	CPCB, New Delhi AAQ Standard	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182: Part 23: 2006, RA 2017	100/24hr	76.3
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60/24hr	40.4
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80/24hr	28.6
4	Nitrogen Oxides as NO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80/24hr	19.2
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2/8hr	0.89
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	VCSPL/AAQ-SOP/001:2019	180/1hr	<4.0
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400/24hr	<20.0
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1/24hr	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20/Annual	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6/Annual	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5/Annual	<4.0
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1/Annual	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 9 µg/m<sup>3</sup>, O<sub>3</sub><4 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As < 1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO-<0.1 mg/m<sup>3</sup>

\*\*\* End Report\*\*\*

Reviewed by  
**Abhuri Sivaramayya**  
(Assistant Manager)

Approved by  
**Soumendra manajit Biswal**  
(Authorized Signatory)

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## TEST REPORT

ULR No: TC794424000001538F

Date: 09.12.2024

Name & Address of the Customer	: M/s Bhusan Power & Steel Limited, Sambalpur, Odisha-768210 (A JSW Group Company)		
Sample Code	: VCSPL/ENV/041224/003	Date of Sampling	: 29.11.2024
		Sample Received on	: 02.12.2024
Sample Description	: Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt. 04.09.2021
Identification by Customer	: AAQMS-3	Sampling Location	: Sripura Village
Environment Condition during Sampling	: Atmospheric Temp.: 26 - 36°C Barometric Pressure : 750 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550), VOC Sampler
Sample Condition	: Air Tight Sealed and gaseous Sample	Sampling done by	: Mr. Shrikant Das Mistry
Sampling plan reference No.	: 4500201422/29.11.2024	Sampling Coordinates	: Lat: 21.777972 N Long: 84.03153 E
Test Started on	: 02.12.2024	Test Completed on	: 07.12.2024

### I. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	CPCB, New Delhi AAQ Standard	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182: Part 23: 2006, RA 2017	100/24hr	64.3
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60/24hr	35.7
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80/24hr	23.9
4	Nitrogen Oxides as NO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80/24hr	17.5
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2/8hr	0.72
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	VCSPL/AAQ-SOP/001:2019	180/1hr	<4.0
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400/24hr	<20.0
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1/24hr	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20/Annual	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6/Annual	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5/Annual	<4.0
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1/Annual	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 9 µg/m<sup>3</sup>, O<sub>3</sub><4 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As < 1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO-<0.1 mg/m<sup>3</sup>

\*\*\* End Report\*\*\*



Reviewed by  
Abhuri Sivaramayya  
(Assistant Manager)



Approved by  
Soumendrananjit Biswal  
(Authorized Signatory)

#### TERMS AND CONDITION:

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- Decision rule applied whenever the requirements/specification provided by customers/standard requirement.



# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

(ISO 9001:2015, ISO 14001:2015, ISO 45001:2018(OH&S), ISO/IEC 17025:2017 Certified)



## TEST REPORT

ULR No: TC794424000001539F

Date: 09.12.2024

Name & Address of the Customer	: M/s Bhusan Power & Steel Limited, Sambalpur, Odisha-768210 (A JSW Group Company)		
Sample Code	: VCSPL/ENV/041224/004	Date of Sampling	: 29.11.2024
		Sample Received on	: 02.12.2024
Sample Description	: Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt. 04.09.2021
Identification by Customer	: AAQMS-4	Sampling Location	: Bishidihi Village
Environment Condition during Sampling	: Atmospheric Temp.: 26 - 36°C Barometric Pressure: 750 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550), VOC Sampler
Sample Condition	: Air Tight Sealed and gaseous Sample	Sampling done by	: Mr. Shrikant Das Mistry
Sampling plan reference No.	: 4500201422/29.11.2024	Sampling Coordinates	: Lat: 21.760388 N Long: 84.043215 E
Test Started on	: 02.12.2024	Test Completed on	: 07.12.2024

### I. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	CPCB, New Delhi AAQ Standard	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182: Part 23: 2006, RA 2017	100/24hr	67.2
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60/24hr	37.4
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80/24hr	25.9
4	Nitrogen Oxides as NO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80/24hr	17.3
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2/8hr	0.70
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	VCSPL/AAQ-SOP/001:2019	180/1hr	<4.0
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400/24hr	<20.0
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1/24hr	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20/Annual	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6/Annual	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5/Annual	<4.0
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1/Annual	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 9 µg/m<sup>3</sup>, O<sub>3</sub><4 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As < 1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO-<0.1 mg/m<sup>3</sup>

\*\*\* End Report\*\*\*



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**Annexure-3**

**Photographs of the plantation taken in Tailing Pond Area.**



**Plantation Near Pond facing towards Bisadihi village**



**Watering of Plantation in Pond No-5 & 9**



**Plantation Near Pond No-11**

**Inspection Report of visit regarding verification of compliances regarding the Hon'ble NGT case in the matter of O.A. No. 43/2024/EZ – Akash Kalo & Others – Vrs. M/s. Bhusan Power and Steel Limited, At- Thelkoloji, PO- Lapanga, Dist.- Sambalpur, Odisha**

An inspection was conducted on 06.01.2025 in connection with the verification of the compliances regarding the Hon'ble NGT in the matter of O.A. No. 43/2024/EZ – Akash Kalo & Others – Vrs. M/s. Bhusan Power and Steel Limited, At- Thelkoloji, PO- Lapanga, Dist.- Sambalpur, Odisha. Sri Niranjan Parida, Sr. Mgr, Environment, Sri D K Nayak, AGM, Admin, Sri Girish Tiwari, Sr. Mgr., Beneficiation plant of M/s Bhusan Power & Steel Ltd., Sambalpur were present during the visit along with other representatives of the industry.

**Background:**

The industry has obtained consent to operate issued by OSPCB vide letter no. 3439/IND-I-CON-4650, dated 12.03.2024 valid till 31.03.2025.

In connection with the matter of O.A. No. 43/2024/EZ – Akash Kalo & Others – Vrs. M/s. Bhusan Power and Steel Limited, At- Thelkoloji, PO- Lapanga, Dist.- Sambalpur, Odisha of the Hon'ble NGT, a direction u/s. 31A of Air (PCP) Act, 1981 & U/s. 33A of Water (PCP) Act, 1974 amendments thereunder was issued by the Board to the unit vide HO letter no. 13279/IND-I-CON-4650 dtd. 21.08.2024.

The unit had submitted its reply to the aforesaid direction, vide their letter no. JSWBPSL/ENV/24-25/042 dtd. 21.08.2024. The unit was inspected on 07.10.2024 by the Board officials to verify the compliance status and observed noncompliance as per the letter of the unit.

Basing upon which a Show Cause Notice (SCN) was issued to the unit vide HO letter no. 16756/IND-I-CON-4650 dt. 21.10.2024.

The industry in reply to the show cause has submitted their reply vide their office letter no. JSWBPSL/ENV/24-25/074 dtd. 27.12.2024.

**Observations to the points raised in the Show Cause Notice issued from the Head office – SPCB, Odisha vide letter no-15756/IND-I-CON-4650 dtd. 21.10.2024:**

Sl.No.	Points raised in the SCN	Compliance Status
a	Construct stone pitching around the tailing pond facing towards the Pond of village Bisadihi to protect any spillage towards the village pond.	On the day of inspection, it was observed that the stone pitching work around the tailing pond facing towards the pond of village Bisadihi has been completed.
b	Engage an accredited organization for carrying periodical monitoring of groundwater and pond, dug well, and tube well of the alleged village as well as ambient air quality monitoring at the dump site and the report shall be submitted to the Board.	On enquiry with the representative of the unit, it was known that the unit has engaged M/s. Visiontek Consultancy Services Pvt. Ltd., a NABL, MOEF & CC accredited Laboratory for monitoring of ground water, pond and tube well of the alleged village as well as ambient air quality monitoring at the dump site. The unit has submitted monitoring report for the month of November, 2024.
c	Carry out plantation activity beside the tailing pond towards the	The unit has planted about total 200 nos. saplings adjacent to the tailing pond dyke

	Bisadihi village.	areas towards Bisadihi village. However, more no. of plantation has to be carried out by the unit.
d	Engage a third party to study the environmental impact of the iron ore tailing pond around a 10 km radius of the Tailing Pond in consultation with the State Pollution Control Board.	The unit has already submitted the environmental impact of the iron ore tailing pond around a 10 KM radius of the tailing Pond. The unit has engaged Chemistry Department of the Veer Surendra Sai University of Technology (VSSUT)] for the above study.

**Other observation:**

1. The unit has installed 62 nos. of fixed type water sprinklers in the tailing pond area in three sides of the Tailing Pond (Pond no. -2 & 5) to control the fugitive dust during handling of iron ore tailings.
2. The garland drain around the periphery of the Tailing Pond towards the Village Bisadihi has been concreted with an intermediate holding tank.



Stone pitching work of the Tailing Pond towards the village Bisadihi



Holding tank of the garland drain around the Tailing Pond No. 2



Fixed type water sprinklers around the Tailing Pond No. 2 & 5 in operation



Few saplings planted around the Tailing pond towards the village Bisadihi

**Asst. Env. Scientist**

SPC Board, Sambalpur

**Asst. Environmental Scientist**  
 Regional Office of State Pollution  
 Control Board, Sambalpur.

**Asst. Env. Engineer**

SPC Board, Sambalpur

**Asst. Environmental Engineer**  
 State Pollution Control Board  
 Regional Office, Sambalpur.