



Eco Care

Specialised House on Environmental Monitoring, Analysis, Assessment & Management

Annexure VIII

Phone : (0341) 2252011

(0341) 3290511

Fax : (0341) 2252011

Manoj Talkies, (Basement Floor)

Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

AMBIENT AIR QUALITY TEST REPORT (MONTH OF SEPTEMBER)

Report Release Date : 09.09.2014	Protocol : IS Method						
Test Report No. : JA/140908/135/2014/534	Sample Description : Ambient Air						
Sampling Date : 04.09.2014 to 05.09.2014	Type of Industry : Coated Steel Plant						
Name of Industry: Tata Blue Scope Steel Ltd. At. Bara, P.O. Agrico JAMSHEDPUR - 831 009, Jharkhand	Sampling Location : Near Main Gate						
Customer Rep. : Mr. Samresh Kumar	<table border="1"> <tr> <td>Average Temperature (°C)</td> <td>Average Relative Humidity (%)</td> <td>Average Barometric Pressure (mm of Hg)</td> </tr> <tr> <td>30.5</td> <td>64.0</td> <td>752</td> </tr> </table>	Average Temperature (°C)	Average Relative Humidity (%)	Average Barometric Pressure (mm of Hg)	30.5	64.0	752
Average Temperature (°C)	Average Relative Humidity (%)	Average Barometric Pressure (mm of Hg)					
30.5	64.0	752					
	Sample Drawn by : ECO CARE (Mr. Rajeev Kumar & Team)						


SL NO	TESTS	PROTOCOL	RESULT	Limit as per NAAQS
1	SPM $\mu\text{g}/\text{m}^3$ (>10 micron ($\mu\text{g}/\text{M}^3$))	IS 5182:Part 23:2006	166.65	500
2	Particulate Matter PM ₁₀ $\mu\text{g}/\text{m}^3$	IS 5182:Part 23:2006	65.69	100
3	Particulate Matter PM _{2.5} $\mu\text{g}/\text{m}^3$	USEPA CFR40(50), Appendix L	33.83	60
4	Sulphur Dioxide (SO ₂), $\mu\text{g}/\text{m}^3$	IS 5182:Part 2:2001	27.19	80
5	Nitrogen Dioxide (NO _x), $\mu\text{g}/\text{m}^3$	IS 5182:Part 6:2006	25.26	80
6	Lead (Pb), $\mu\text{g}/\text{m}^3$	AAS METHOD AFTER SAMPLING	0.23	1.0
7	Arsenic (As), ng/m ³	AAS METHOD AFTER SAMPLING	B.D.L	6
8	Nickel (Ni), ng/m ³	AAS METHOD AFTER SAMPLING	11.59	20
9	Carbon Monoxide (CO), mg/m ³	NDIR SPECTROSCOPY	0.26	2
10	Ammonia (NH ₃), $\mu\text{g}/\text{m}^3$	INDO PHENOL BLUE METHOD	12.39	400
11	Benzo(Alpha) Pyrene, ng/m ³	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	0.144	1
12	Ozone (O ₃), $\mu\text{g}/\text{m}^3$	CHEMICAL METHOD	11.76	180
13	Benzene (C ₆ H ₆), $\mu\text{g}/\text{m}^3$	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	0.22	5

**BDL = Below Detectable Limits

***** END OF REPORT *****

Remarks : Nil

For ECO CARE


Dr. Dibyendu Banerjee
M.Sc, M.Phil, Phd, PD
Technical Manager/Sr. Scientist
(Authorised Signatory)

Sampling Witnessed By : Unit Representative

NOTE: 1) This certificate refers to the values obtained at the time of testing and results related to the items tested
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Manoj Talkies, (Basement Floor)
Kumarapur, Asansol - 713304
Dist. Burdwan (West Bengal)

AMBIENT AIR QUALITY TEST REPORT (MONTH OF SEPTEMBER)

Report Release Date : 09.09.2014	Protocol : IS Method		
Test Report No. : JA/140908/136/2014/535	Sample Description : Ambient Air		
Sampling Date : 04.09.2014 to 05.09.2014	Type of Industry : Coated Steel Plant		
Name of Industry: Tata Blue Scope Steel Ltd. At. Bara, P.O. Agrico JAMSHEDPUR - 831 009, Jharkhand	Sampling Location : Near L.P.G Storage Area		
Customer Rep. : Mr. Samresh Kumar	Average Temperature (°C)	Average Relative Humidity (%)	Average Barometric Pressure (mm of Hg)
	30.5	64.0	752
Sample Drawn by : ECO CARE (Mr. Rajeev Kumar & Team)			

SL NO	TESTS	PROTOCOL	RESULT	Limit as per NAAQS
1	SPM $\mu\text{g}/\text{m}^3$ (>10 micron $\mu\text{g}/\text{M}^3$)	IS 5182:Part 23:2006	162.64	500
2	Particulate Matter PM ₁₀ $\mu\text{g}/\text{m}^3$	IS 5182:Part 23:2006	68.16	100
3	Particulate Matter PM _{2.5} $\mu\text{g}/\text{m}^3$	USEPA CFR40(50), Appendix L	40.60	60
4	Sulphur Dioxide (SO ₂), $\mu\text{g}/\text{m}^3$	IS 5182:Part 2:2001	29.48	80
5	Nitrogen Dioxide (NO _x), $\mu\text{g}/\text{m}^3$	IS 5182:Part 6:2006	25.25	80
6	Lead (Pb), $\mu\text{g}/\text{m}^3$	AAS METHOD AFTER SAMPLING	0.19	1.0
7	Arsenic (As), ng/m^3	AAS METHOD AFTER SAMPLING	B.D.L	6
8	Nickel (Ni), ng/m^3	AAS METHOD AFTER SAMPLING	11.77	20
9	Carbon Monoxide (CO), mg/m^3	NDIR SPECTROSCOPY	0.35	2
10	Ammonia (NH ₃), $\mu\text{g}/\text{m}^3$	INDO PHENOL BLUE METHOD	11.41	400
11	Benzo(Alpha) Pyrene, ng/m^3	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	0.127	1
12	Ozone (O ₃), $\mu\text{g}/\text{m}^3$	CHEMICAL METHOD	11.4	180
13	Benzene (C ₆ H ₆), $\mu\text{g}/\text{m}^3$	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	0.29	5

**BDL = Below Detectable Limits

***** END OF REPORT *****

Remarks : Nil

For ECO CARE

Dr. Dibyendu Banerjee
Dr. Dibyendu Banerjee
M.Sc, M.Phil, PhD, PD
Technical Manager/Sr. Scientist
(Authorised Signatory)

Sampling Witnessed By : Unit Representative

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Dist. Burdwan (West Bengal)

AMBIENT AIR QUALITY TEST REPORT (MONTH OF SEPTEMBER)

Report Release Date : 09.09.2014	Protocol : IS Method						
Test Report No. : JA/140908/137/2014/536	Sample Description : Ambient Air						
Sampling Date : 05.09.2014 to 06.09.2014	Type of Industry : Coated Steel Plant						
Name of Industry: Tata Blue Scope Steel Ltd. At. Bara, P.O. Agrico JAMSHEDPUR – 831 009, Jharkhand	Sampling Location : S.R.L Pack Line North Area						
Customer Rep. : Mr. Samresh Kumar	<table border="1"> <tr> <td>Average Temperature (°C)</td> <td>Average Relative Humidity (%)</td> <td>Average Barometric Pressure (mm of Hg)</td> </tr> <tr> <td>31.0</td> <td>62.0</td> <td>752</td> </tr> </table>	Average Temperature (°C)	Average Relative Humidity (%)	Average Barometric Pressure (mm of Hg)	31.0	62.0	752
Average Temperature (°C)	Average Relative Humidity (%)	Average Barometric Pressure (mm of Hg)					
31.0	62.0	752					
	Sample Drawn by : ECO CARE (Mr. Rajeev Kumar & Team)						

SL NO	TESTS	PROTOCOL	RESULT	Limit as per NAAQS
1	SPM $\mu\text{g}/\text{m}^3$ (>10 micron ($\mu\text{g}/\text{M}^3$))	IS 5182:Part 23:2006	172.22	500
2	Particulate Matter PM ₁₀ $\mu\text{g}/\text{m}^3$	IS 5182:Part 23:2006	71.06	100
3	Particulate Matter PM _{2.5} $\mu\text{g}/\text{m}^3$	USEPA CFR40(50), Appendix L	36.93	60
4	Sulphur Dioxide (SO ₂), $\mu\text{g}/\text{m}^3$	IS 5182:Part 2:2001	25.36	80
5	Nitrogen Dioxide (NO _x), $\mu\text{g}/\text{m}^3$	IS 5182:Part 6:2006	24.05	80
6	Lead (Pb), $\mu\text{g}/\text{m}^3$	AAS METHOD AFTER SAMPLING	0.20	1.0
7	Arsenic (As), ng/m ³	AAS METHOD AFTER SAMPLING	B.D.L	6
8	Nickel (Ni), ng/m ³	AAS METHOD AFTER SAMPLING	11.55	20
9	Carbon Monoxide (CO), mg/m ³	NDIR SPECTROSCOPY	0.27	2
10	Ammonia (NH ₃), $\mu\text{g}/\text{m}^3$	INDO PHENOL BLUE METHOD	12.03	400
11	Benzo(Alpha) Pyrene, ng/m ³	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	0.151	1
12	Ozone (O ₃), $\mu\text{g}/\text{m}^3$	CHEMICAL METHOD	11.97	180
13	Benzene (C ₆ H ₆), $\mu\text{g}/\text{m}^3$	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	0.31	5

**BDL = Below Detectable Limits

***** END OF REPORT *****

Remarks : Nil

For ECO CARE

Dr. Dibyendu Banerjee

M.Sc, M.Phil, Phd, PD

Technical Manager/Sr. Scientist
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AMBIENT AIR QUALITY TEST REPORT (MONTH OF SEPTEMBER)

Report Release Date : 09.09.2014	Protocol : IS Method						
Test Report No. : JA/140908/138/2014/537	Sample Description : Ambient Air						
Sampling Date : 05.09.2014 to 06.09.2014	Type of Industry : Coated Steel Plant						
Name of Industry: Tata Blue Scope Steel Ltd. At: Bara, P.O. Agrico JAMSHEDPUR – 831 009, Jharkhand	Sampling Location : Near Nitrogen Plant Area						
Customer Rep. : Mr. Samresh Kumar	<table border="1"> <tr> <td>Average Temperature (°C)</td> <td>Average Relative Humidity (%)</td> <td>Average Barometric Pressure (mm of Hg)</td> </tr> <tr> <td>31.0</td> <td>62.0</td> <td>752</td> </tr> </table>	Average Temperature (°C)	Average Relative Humidity (%)	Average Barometric Pressure (mm of Hg)	31.0	62.0	752
Average Temperature (°C)	Average Relative Humidity (%)	Average Barometric Pressure (mm of Hg)					
31.0	62.0	752					
	Sample Drawn by : ECO CARE (Mr. Rajeev Kumar & Team)						

SL. NO	TESTS	PROTOCOL	RESULT	Limit as per NAAQS
1	SPM $\mu\text{g}/\text{m}^3$ (>10 micron ($\mu\text{g}/\text{M}^3$))	IS 5182:Part 23:2006	167.31	500
2	Particulate Matter PM_{10} $\mu\text{g}/\text{m}^3$	IS 5182:Part 23:2006	67.80	100
3	Particulate Matter $\text{PM}_{2.5}$ $\mu\text{g}/\text{m}^3$	USEPA CFR40(50), Appendix L	32.49	60
4	Sulphur Dioxide (SO_2), $\mu\text{g}/\text{m}^3$	IS 5182:Part 2:2001	28.11	80
5	Nitrogen Dioxide (NO_x), $\mu\text{g}/\text{m}^3$	IS 5182:Part 6:2006	24.38	80
6	Lead (Pb), $\mu\text{g}/\text{m}^3$	AAS METHOD AFTER SAMPLING	0.19	1.0
7	Arsenic (As), ng/m^3	AAS METHOD AFTER SAMPLING	B.D.L	6
8	Nickel (Ni), ng/m^3	AAS METHOD AFTER SAMPLING	12.19	20
9	Carbon Monoxide (CO), mg/m^3	NDIR SPECTROSCOPY	0.54	2
10	Ammonia (NH_3), $\mu\text{g}/\text{m}^3$	INDO PHENOL BLUE METHOD	11.90	400
11	Benzo(Alpha) Pyrene, ng/m^3	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	0.161	1
12	Ozone (O_3), $\mu\text{g}/\text{m}^3$	CHEMICAL METHOD	11.8	180
13	Benzene (C_6H_6), $\mu\text{g}/\text{m}^3$	ABSORPTION & DESORPTION FOLLOWED BY GC ANALYSIS	0.37	5

**BDL = Below Detectable Limits

***** END OF REPORT *****

Remarks : Nil

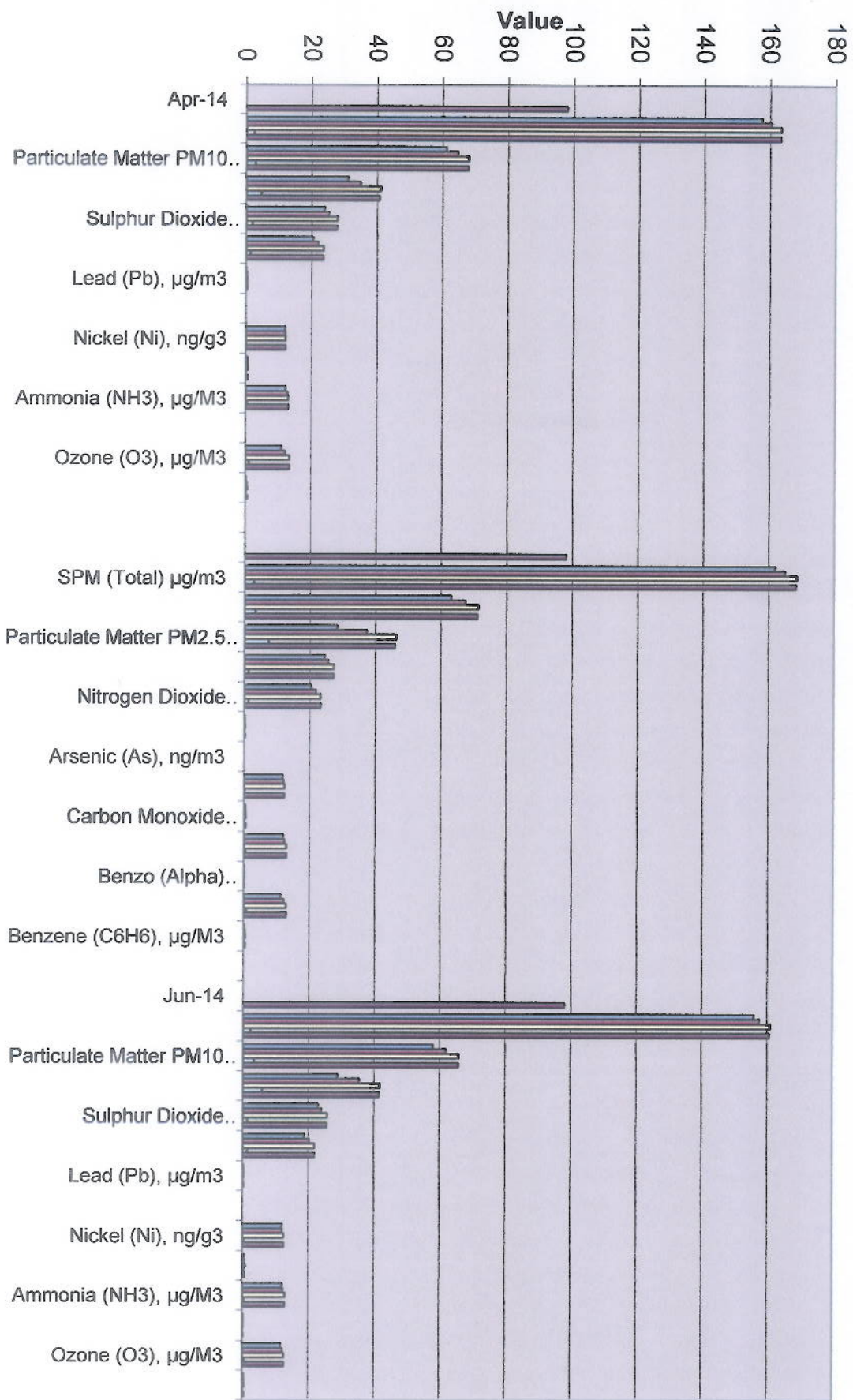
For ECO CARE

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M.Sc, M.Phil, Phd, PD
Technical Manager/Sr. Scientist
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Sampling Witnessed By : Unit Representative

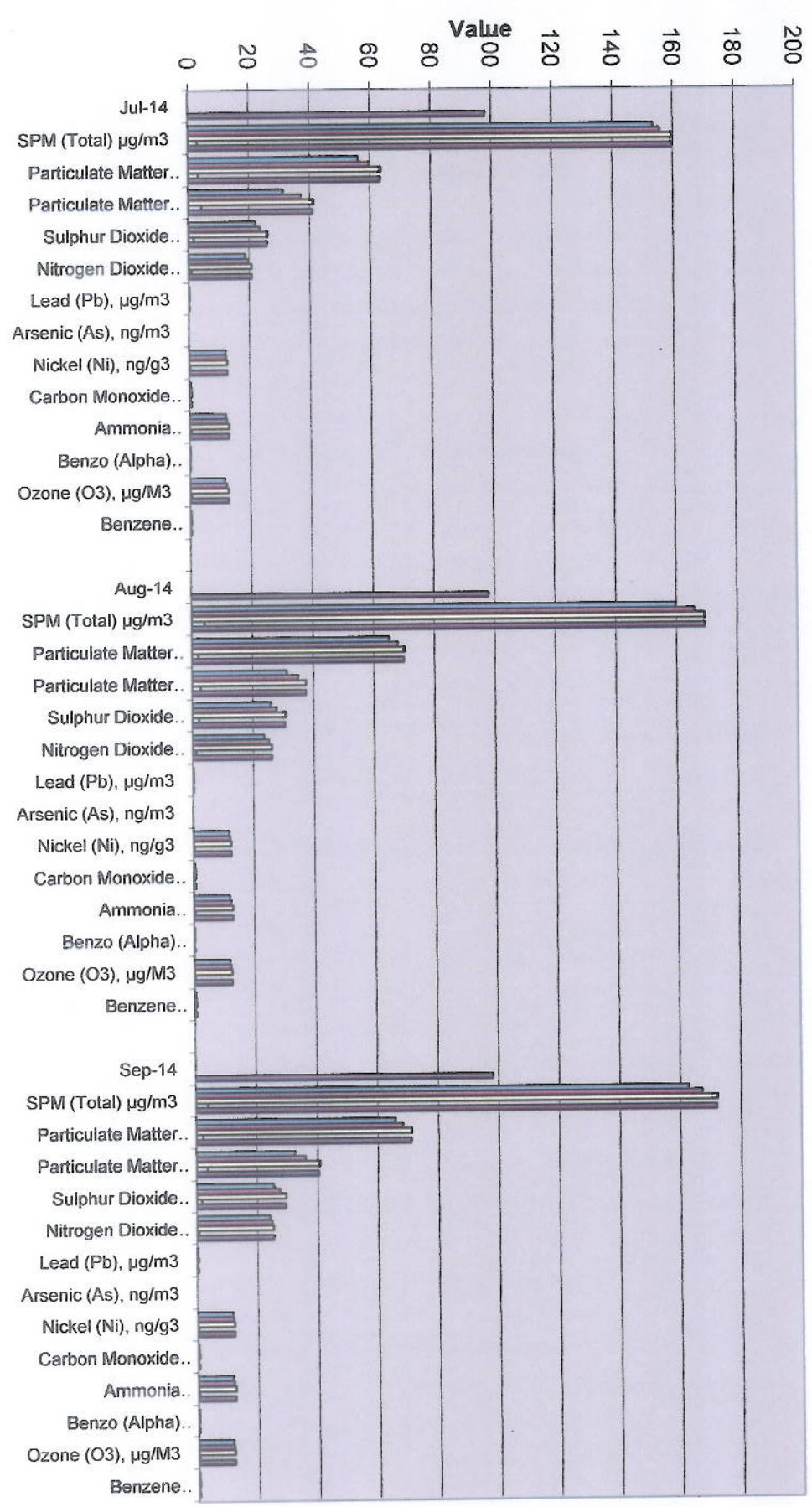
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TATA BLUE SCOPE STEEL LTD, Jamshedpur.
MONTHLY TRENDS OF AIR QUALITY PARAMETERS
(APRIL 2014 - JUNE 2014)



Amekure DIT

TATA BLUE SCOPE STEEL LTD, Jamshedpur.
 MONTHLY TRENDS OF AIR QUALITY PARAMETERS
 (JULY 2014 - SEPTEMBER 2014)



TESTS	MONITORED DATA				SPATIAL TREND
	Near L.P.G Storage Area	Near Main Gate	Near S.R.L Pack line North Area	Near Nitrogen Plant Area	
Apr-14					
SPM (Total) $\mu\text{g}/\text{m}^3$	157.35	159.76	163.24	160.53	Apr-14 SPM (Total) $\mu\text{g}/\text{m}^3$ min mean max sd
Particulate Matter PM_{10} $\mu\text{g}/\text{m}^3$	61.18	64.2	67.95	65.23	157.35 160.22 163.24 2.43 163.08
Particulate Matter $\text{PM}_{2.5}$ $\mu\text{g}/\text{m}^3$	41.08	31.5	35.83	31.05	61.18 64.64 67.95 2.80 67.79
Sulphur Dioxide (SO_2) $\mu\text{g}/\text{M}^3$	25.09	27.83	23.9	23.99	31.05 34.87 41.08 4.67 40.77
Nitrogen Dioxide (NO_2) $\mu\text{g}/\text{M}^3$	22.42	23.62	20.45	21.54	23.90 25.20 27.83 1.83 27.67
Lead (Pb), $\mu\text{g}/\text{m}^3$	0.19	0.017	0.12	0.11	20.45 22.01 23.62 1.34 23.55
Arsenic (As), ng/m^3	B.D.L	B.D.L	B.D.L	B.D.L	0.02 0.11 0.19 0.07 0.19
Nickel (Ni), ng/g^3	11.99	12.09	11.89	12.11	0.00 #DIV/0! 0.00 0.00 #NUM!
Carbon Monoxide (CO), mg/M^3	0.42	0.37	0.39	0.45	0.00 11.89 12.02 12.11 0.10 12.11
Ammonia (NH_3), $\mu\text{g}/\text{M}^3$	12.69	12.95	12.11	12.76	0.37 0.41 0.45 0.03 0.45
Benzo (Alpha) Pyrene, ng/M^3	B.D.L	B.D.L	B.D.L	B.D.L	12.11 12.63 12.95 0.36 12.94
Ozone (O_3), $\mu\text{g}/\text{M}^3$	10.9	11.7	13.4	12.3	0.00 #DIV/0! 0.00 0.00 1.05 13.33
Benzene (C_6H_6), $\mu\text{g}/\text{M}^3$	0.27	0.19	0.37	0.34	10.90 12.08 13.40 1.05 13.33
					0.19 0.29 0.37 0.08 0.37
May-14					
SPM (Total) $\mu\text{g}/\text{m}^3$	161.86	164.96	168.47	163.99	May-14 SPM (Total) $\mu\text{g}/\text{m}^3$ min mean max sd
Particulate Matter PM_{10} $\mu\text{g}/\text{m}^3$	63.08	67.23	71.31	67.72	161.86 164.82 168.47 2.76 168.26
Particulate Matter $\text{PM}_{2.5}$ $\mu\text{g}/\text{m}^3$	46.35	36.12	38.63	28.31	63.08 67.34 71.31 3.37 71.09
Sulphur Dioxide (SO_2) $\mu\text{g}/\text{M}^3$	25.45	27.28	24.45	24.81	28.31 37.35 46.35 7.44 45.89
Nitrogen Dioxide (NO_2) $\mu\text{g}/\text{M}^3$	22.31	23.29	20.34	21.65	24.45 25.50 27.28 1.26 27.17
Lead (Pb), $\mu\text{g}/\text{m}^3$	0.22	0.19	0.14	0.15	20.34 21.90 23.29 1.24 23.23
Arsenic (As), ng/m^3	B.D.L	B.D.L	B.D.L	B.D.L	0.14 0.18 0.22 0.04 0.22
Nickel (Ni), ng/g^3	12.05	11.79	12.06	12.34	0.00 #DIV/0! 0.00 0.00 #NUM!
Carbon Monoxide (CO), mg/M^3	0.39	0.41	0.42	0.53	0.00 11.79 12.06 12.34 0.22 12.32
Ammonia (NH_3), $\mu\text{g}/\text{M}^3$	12.05	13.01	11.91	12.49	0.39 0.44 0.53 0.06 0.52
Benzo (Alpha) Pyrene, ng/M^3	0.151	0.159	0.172	0.146	11.91 12.37 13.01 0.50 12.98
Ozone (O_3), $\mu\text{g}/\text{M}^3$	11.2	12.1	12.9	12.7	0.15 0.16 0.17 0.01 0.17
Benzene (C_6H_6), $\mu\text{g}/\text{M}^3$	0.32	0.25	0.46	0.39	11.20 12.23 12.90 0.76 12.89
					0.25 0.36 0.46 0.09 0.46
Jun-14					
SPM (Total) $\mu\text{g}/\text{m}^3$	155.83	156.55	160.81	156.87	Jun-14 SPM (Total) $\mu\text{g}/\text{m}^3$ min mean max sd
Particulate Matter PM_{10} $\mu\text{g}/\text{m}^3$	57.97	60.63	65.77	62.82	155.83 157.52 160.81 2.24 160.57

Particulate Matter PM _{2.5} µg/m ³	38.83	28.79	32.4	41.71	Particulate Matter PM _{2.5} µg/m ³	28.79	35.43	41.71	5.90	41.54
Sulphur Dioxide (SO ₂), µg/M ³	23.9	25.73	22.89	22.98	Sulphur Dioxide (SO ₂), µg/M ³	22.89	23.88	25.73	1.32	25.62
Nitrogen Dioxide (NO ₂), µg/M ³	20.34	21.87	18.71	20.23	Nitrogen Dioxide (NO ₂), µg/M ³	18.71	20.29	21.87	1.29	21.78
Lead (Pb), µg/m ³	0.27	0.21	0.19	0.19	Lead (Pb), µg/m ³	0.19	0.22	0.27	0.04	0.27
Arsenic (As), ng/m ³	B.D.L	B.D.L	B.D.L	B.D.L	Arsenic (As), ng/m ³	0.00	#DIV/0!	0.00	0.00	#NUM!
Nickel (Ni), ng/g ³	11.96	11.92	11.89	12.55	Nickel (Ni), ng/g ³	11.89	12.08	12.55	0.31	12.51
Carbon Monoxide (CO), mg/M3	0.43	0.37	0.35	0.67	Carbon Monoxide (CO), mg/M3	0.35	0.46	0.67	0.15	0.66
Ammonia (NH ₃), µg/M3	11.97	12.91	12.08	12.08	Ammonia (NH ₃), µg/M3	11.97	12.26	12.91	0.44	12.86
Benzo (Alpha) Pyrene, ng/M3	0.147	0.167	0.167	0.151	Benzo (Alpha) Pyrene, ng/M3	0.15	0.16	0.17	0.01	0.17
Ozone (O ₃), µg/M3	11.6	11.89	12.6	12.4	Ozone (O ₃), µg/M3	11.60	12.12	12.60	0.46	12.59
Benzene (C ₆ H ₆), µg/M3	0.38	0.29	0.41	0.43	Benzene (C ₆ H ₆), µg/M3	0.29	0.38	0.43	0.06	0.43

Jul-14					Jul-14					min	mean	max	sd	98
SPM (Total) µg/m ³	153.31	153.45	159.74	156.15	SPM (Total) µg/m ³	153.31	155.66	159.74	3.02	159.52				
Particulate Matter PM ₁₀ µg/m ³	55.96	58.22	63.4	61.16	Particulate Matter PM ₁₀ µg/m ³	55.96	59.69	63.40	3.27	63.27				
Particulate Matter PM _{2.5} µg/m ³	39.11	31.12	41.15	36.82	Particulate Matter PM _{2.5} µg/m ³	31.12	37.05	41.15	4.33	41.03				
Sulphur Dioxide (SO ₂), µg/M ³	23.07	26	22.07	22.8	Sulphur Dioxide (SO ₂), µg/M ³	22.07	23.49	26.00	1.73	25.82				
Nitrogen Dioxide (NO ₂), µg/M ³	20.01	20.78	18.6	19.47	Nitrogen Dioxide (NO ₂), µg/M ³	18.60	19.72	20.78	0.92	20.73				
Lead (Pb), µg/m ³	0.25	0.23	0.21	0.21	Lead (Pb), µg/m ³	0.21	0.23	0.25	0.02	0.25				
Arsenic (As), ng/m ³	B.D.L	B.D.L	B.D.L	B.D.L	Arsenic (As), ng/m ³	0.00	#DIV/0!	0.00	0.00	#NUM!				
Nickel (Ni), ng/g ³	11.85	12.01	11.85	12.51	Nickel (Ni), ng/g ³	11.85	12.06	12.51	0.31	12.48				
Carbon Monoxide (CO), mg/M3	0.46	0.34	0.33	0.66	Carbon Monoxide (CO), mg/M3	0.33	0.45	0.66	0.15	0.65				
Ammonia (NH ₃), µg/M3	11.91	12.97	12.02	12.03	Ammonia (NH ₃), µg/M3	11.91	12.23	12.97	0.49	12.91				
Benzo (Alpha) Pyrene, ng/M3	0.149	0.162	0.161	0.154	Benzo (Alpha) Pyrene, ng/M3	0.15	0.16	0.16	0.01	0.16				
Ozone (O ₃), µg/M3	11.4	11.96	12.6	12.2	Ozone (O ₃), µg/M3	11.40	12.04	12.60	0.50	12.58				
Benzene (C ₆ H ₆), µg/M3	0.36	0.31	0.37	0.46	Benzene (C ₆ H ₆), µg/M3	0.31	0.38	0.46	0.06	0.45				
Aug-14					Aug-14					min	mean	max	sd	98
SPM (Total) µg/m ³	159.64	167.26	169.39	166.65	SPM (Total) µg/m ³	159.64	165.74	169.39	4.23	169.26				
Particulate Matter PM ₁₀ µg/m ³	67.77	65.07	70.01	68.45	Particulate Matter PM ₁₀ µg/m ³	65.07	67.83	70.01	2.06	69.92				
Particulate Matter PM _{2.5} µg/m ³	31.25	36.25	37.54	34.37	Particulate Matter PM _{2.5} µg/m ³	31.25	34.85	37.54	2.73	37.46				
Sulphur Dioxide (SO ₂), µg/M ³	30.67	26.46	25.73	27.65	Sulphur Dioxide (SO ₂), µg/M ³	25.73	27.63	30.67	2.18	30.49				
Nitrogen Dioxide (NO ₂), µg/M ³	25.69	24.93	26.13	23.62	Nitrogen Dioxide (NO ₂), µg/M ³	23.62	25.09	26.13	1.10	26.10				
Lead (Pb), µg/m ³	0.21	0.25	0.23	0.23	Lead (Pb), µg/m ³	0.21	0.23	0.25	0.02	0.25				
Arsenic (As), ng/m ³	B.D.L	B.D.L	B.D.L	B.D.L	Arsenic (As), ng/m ³	0.00	#DIV/0!	0.00	0.00	#NUM!				
Nickel (Ni), ng/g ³	11.98	11.91	11.7	12.42	Nickel (Ni), ng/g ³	11.70	12.00	12.42	0.30	12.39				

Carbon Monoxide (CO), mg/M3	0.4	0.31	0.31	0.61	Carbon Monoxide (CO), mg/M3	0.31	0.41	0.61	0.14	0.60
Ammonia (NH3), µg/M3	11.75	12.88	12.13	12.11	Ammonia (NH3), µg/M3	11.75	12.22	12.88	0.47	12.84
Benzo (Alpha) Pyrene, ng/M3	0.137	0.169	0.169	0.159	Benzo (Alpha) Pyrene, ng/M3	0.14	0.16	0.17	0.02	0.17
Ozone (O3), µg/M3	11.7	12.06	12.4	12.1	Ozone (O3), µg/M3	11.70	12.07	12.40	0.29	12.38
Benzene (C6H6), µg/M3	0.32	0.29	0.36	0.41	Benzene (C6H6), µg/M3	0.29	0.35	0.41	0.05	0.41
Sep-14					Sep-14					
SPM (Total), µg/m ³	162.64	166.65	172.22	167.31	SPM (Total), µg/m ³	min	mean	max	sd	98
Particulate Matter PM ₁₀ , µg/m ³	68.16	65.69	71.06	67.8	Particulate Matter PM ₁₀ , µg/m ³	65.69	68.18	71.06	2.21	70.89
Particulate Matter PM _{2.5} , µg/m ³	40.6	33.83	36.93	32.49	Particulate Matter PM _{2.5} , µg/m ³	32.49	35.96	40.60	3.61	40.38
Sulphur Dioxide (SO ₂), µg/M ³	29.48	27.19	25.36	28.11	Sulphur Dioxide (SO ₂), µg/M ³	25.36	27.54	29.48	1.73	29.40
Nitrogen Dioxide (NO ₂), µg/M ³	25.25	25.26	24.05	24.38	Nitrogen Dioxide (NO ₂), µg/M ³	24.05	24.74	25.26	0.62	25.26
Lead (Pb), µg/m ³	0.19	0.23	0.2	0.19	Lead (Pb), µg/m ³	0.19	0.20	0.23	0.02	0.23
Arsenic (As), ng/g ³	B.D.L	B.D.L	B.D.L	B.D.L	Arsenic (As), ng/g ³	0.00	#DIV/0!	0.00	0.00	#NUM!
Nickel (Ni), ng/g ³	11.77	11.59	11.55	12.19	Nickel (Ni), ng/g ³	11.55	11.78	12.19	0.29	12.16
Carbon Monoxide (CO), mg/M3	0.35	0.26	0.27	0.54	Carbon Monoxide (CO), mg/M3	0.26	0.36	0.54	0.13	0.53
Ammonia (NH3), µg/M3	11.41	12.39	12.03	11.9	Ammonia (NH3), µg/M3	11.41	11.93	12.39	0.41	12.37
Benzo (Alpha) Pyrene, ng/M3	0.127	0.144	0.151	0.161	Benzo (Alpha) Pyrene, ng/M3	0.13	0.15	0.16	0.01	0.16
Ozone (O3), µg/M3	11.4	11.76	11.97	11.8	Ozone (O3), µg/M3	11.40	11.73	11.97	0.24	11.96
Benzene (C6H6), µg/M3	0.29	0.22	0.31	0.37	Benzene (C6H6), µg/M3	0.22	0.30	0.37	0.06	0.37



Eco Care

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Annexure IX

Phone : (0341) 2252011

(0341) 3290511

Fax : (0341) 2252011

Manoj Talkies, (Basement Floor)

Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

NOISE QUALITY TEST REPORT

Report Release Date : 20.09.2014	Protocol : CPCB Method
Test Report No : JN/140920/76/2014/606	Sample Description : Noise
Name of Industry :	Type of Industry : Coated Steel Plant
Tata Blue Scope Steel Ltd.	Sampling Duration : 60 Minutes
At. Bara, P.O. Agrico	Sampled by : ECO CARE
JAMSHEDPUR - 831 009, Jharkhand.	(Mr. Manoj Panday & Team)
Customer Rep. Mr. Samresh Kumar	Sampling Date : 15.09.2014

METEOROLOGICAL INFORMATION

1	Average Temperature (°C)	30.5
2	Average Relative Humidity (%)	59.8
3	Barometric Pressure (mm of Hg)	750
4	Weather Condition	Clear Day

AMBIENT NOISE QUALITY REPORT

Ambient Noise Level Standards for Industrial Area = Day Time 75.0 dB(A), As per CPCB			
Sampling Location	NOISE LEVEL		
	Minimum	Leq - Mean	Maximum
Near Nitrogen Plant Area	48.80 dB(A)	58.22 dB(A)	64.00 dB(A)
Near S.R.L Pack Line North Area	59.60 dB(A)	66.16 dB(A)	71.20 dB(A)
Near L.P.G Storage Area	54.00 dB(A)	65.41 dB(A)	73.10 dB(A)
Near Main Gate	52.00 dB(A)	60.55 dB(A)	66.90 dB(A)

***** END OF REPORT *****

Remarks : Nil

For ECO CARE

Dr. Dibyendu Banerjee

M.Sc, M.Phil, Phd, PD

Technical Manager/Sr. Scientist
(Authorised Signatory)

Sampling Witnessed by : Unit Representative

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NOISE QUALITY TEST REPORT

Report Release Date : 31.07.2014	Proocol : CPCB Method
Test Report No : JN/140714/52/2014/405	Sample Description : Noise
Name of Industry :	Type of Industry : Coated Steel Plant
Tata Blue Scope Steel Ltd. At. Bara, P.O. Agrico, JAMSHEDPUR -- 831 009, Jharkhand.	Sampling Duration : 60 Minutes
Customer Rep. : Mr. S. Singh	Sampled by : ECO CARE (Mr. Manoj Panday)
	Sampling Date : 23.07.2014

METEOROLOGICAL INFORMATION

1	Average Temperature (°C)	28.7
2	Average Relative Humidity (%)	54.1
3	Barometric Pressure (mm of Hg)	750
4	Weather Condition	Clear Day

AMBIENT NOISE QUALITY REPORT

Noise Level Standards for D.G. Sets (1500 KVA) = Less than 125.8 dB(A), As per CPCB						
Sampling Location	NOISE LEVEL					
	Minimum		Leq - Mean		Maximum	
	Door Oppen	Door Closed	Door Oppen	Door Closed	Door Open	Door Closed
D G Set No - 1	94.90 dB(A)	80.20 dB(A)	97.42 dB(A)	82.21 dB(A)	98.60 dB(A)	84.30 dB(A)
D G Set No - 2	83.60 dB(A)	79.20 dB(A)	97.46 dB(A)	82.29 dB(A)	100.80 dB(A)	86.40 dB(A)

***** END OF REPORT *****

Remarks : Nil

For ECO CARE

(Signature)
Dr. Dibyendu Banerjee
M.Sc, M.Phil, Phd, PD
Technical Manager/Sr. Scientist
(Authorised Signatory)

Sample Witnessed by : Unit Representative

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Annexure X

Phone : (0341) 2252011

(0341) 3290511

Fax : (0341) 2252011

Manoj Talkies, (Basement Floor)

Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

STACK EMISSION TEST REPORT

Report Release Date : 09.09.2014	Protocol : IS Method
Test Report No : JS/140908/206/2014/529	Sample Description : STACK EMISSION
Name of Industry : Tata Blue Scope Steel Ltd.	Type of Industry : Steel Coated Plant
At. Bara, P.O. Agrico,	Sampling Location : Stack Connected to Boiler
JAMSHEDPUR – 831 009, Jharkhand	Sample Stamped as : T – 646
Customer Rep. : Mr. Samresh Kumar	Sample Drawn By : ECO CARE (Mr. Rajeev Kumar & Team)
	Sampling Date : 05.09.2014

GENERAL INFORMATION

1 Particular of the Plant	: Steel Coated Plant
2 Emission Due to	: Process Activity
3 Stack Connected to	: Boiler (10 TPH Boiler)
4 Material of Construction	: M.S.
5 Stack Height from G.L.	: 32.00 m
6 Height of Sampling Port from G.L.	: 15.00 m
7 Height of Sampling Port from L.D.Z.	: ----
8 Dimension of Stack at Sampling Port	: 1.045 m
9 Shape of the Stack	: Circular Ø
10 Working Load	: ----

FUEL CHARACTERISTIC REPORT

1 Type of Fuel	: L.P.G
2 Fuel Consumption	: 290 Kg/hr
3 Calorific Value (K-Cal/Kg)	: ----

RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

		Method
1 Flue Gas Temperature	90 °C	IS 11255 : Part 3
2 Barometric Pressure	752 mm Hg	
3 Velocity of Flue Gas	8.13 m/sec	IS 11255 : Part 3
4 Flue Gas Quantity	19164 NM ³ /hr	IS 11255 : Part 3
5 Concentration of Particulate Matter	42.38 mg/NM ³	IS 11255 : Part 1
6 Concentration of Carbon Dioxide (%)	2.2	IS 13270
7 Concentration of SO ₂	16.29 mg/NM ³	IS 11255 : Part 2
8 Concentration of NO _x	29.24 mg/NM ³	CPCB Method
9 Volatile Organic Compound	81.90 mg/NM ³	

***** END OF REPORT *****

Pollution Control System	: Nil
Ladder	: Permanent
Platform	: Permanent
Sampling Witnessed By	: Unit Representative

For ECO CARE

Dr. Dibyendu Banerjee
M.Sc, M.Phil, Phd, PD
Technical Manager/Sr. Scientist
(Authorised Signatory)

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Annexure XA

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(0341) 3290511

Fax : (0341) 2252011

Manoj Talkies, (Basement Floor)

Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

STACK EMISSION TEST REPORT

Report Release Date : 09.09.2014	Protocol : IS Method
Test Report No : JS/140908/207/2014/530	Sample Description : STACK EMISSION
Name of Industry :	Type of Industry : Steel Coated Plant
Tata Blue Scope Steel Ltd.	Sampling Location : Stack Connected to Paint Banking Oven (C.C.L)
At. Bara, P.O. Agrico,	Sample Stamped as : T - 647
JAMSHEDPUR - 831 009, Jharkhand	Sample Drawn By : ECO CARE (Mr. Rajeev Kumar & Team)
Customer Rep. : Mr. Samresh Kumar	Sampling Date : 08.09.2014

GENERAL INFORMATION

1 Particular of the Plant	: Steel Coated Plant
2 Emission Due to	: Process Activity
3 Stack Connected to	: Paint Banking Oven (C.C.L)
4 Material of Construction	: M.S.
5 Stack Height from G.L.	: 36.00 m
6 Height of Sampling Port from G.L.	: 11.45 m
7 Height of Sampling Port from L.D.Z.	: 3.7 m
8 Dimension of Stack at Sampling Port	: 2.00 m
9 Shape of the Stack	: Circular Ø
10 Working Load	: ----

FUEL CHARACTERISTIC REPORT

1 Type of Fuel	: L.P.G
2 Fuel Consumption	: 330 Kg/hr
3 Calorific Value (K-Cal/Kg)	: ----

RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

		Method
1 Flue Gas Temperature	205 °C	IS 11255 : Part 3
2 Barometric Pressure	752 mm Hg	
3 Velocity of Flue Gas	09.56 m/sec	IS 11255 : Part 3
4 Flue Gas Quantity	64676 NM ³ / hr	IS 11255 : Part 3
5 Concentration of Particulate Matter	35.88 mg/NM ³	IS 11255 : Part 1
6 Concentration of Carbon Dioxide (%)	1.60	IS 13270
7 Concentration of SO ₂	15.30 mg/NM ³	IS 11255 : Part 2
8 Concentration of NO _x	25.80 mg/NM ³	CPCB Method
9 Volatile Organic Compound	96.40 mg/NM ³	

***** END OF REPORT *****

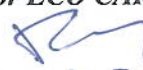
Pollution Control System : Incinerator

Ladder : Permanent

Platform : Permanent

Sampling Witnessed By : Unit Representative

For ECO CARE


Dr. Dibyendu Banerjee
M.Sc, M.Phil, Phd, PD
Technical Manager/Sr. Scientist
(Authorised Signatory)

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Annexure B



Eco Care

Phone : (0341) 2252011

(0341) 3290511

Fax : (0341) 2252011

email : ecocareasansol@rediffmail.com

Specialised House on Environmental Monitoring, Analysis, Assessment & Management

Manoj Talkies, (Basement Floor)

Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

STACK EMISSION TEST REPORT

Report Release Date : 13.10.2014	Protocol : IS Method
Test Report No : JS/140931/241/2014/536	Sample Description : STACK EMISSION
Name of Industry : Tata Blue Scope Steel Ltd.	Type of Industry : Steel Coated Plant
At. Bara. P.O. Agrico	Sampling Location : Stack Connected to M.C.L Furnace
JAMSHEDPUR - 831 009, Jharkhand	Sample Stamped as : T - 648
Customer Rep. : Mr. Samresh Kumar	Sample Drawn By : ECO CARE (Mr. Manoj Pandey & Team)
	Sampling Date : 25.09.2014

GENERAL INFORMATION

1 Particular of the Plant	: Steel Coated Plant
2 Emission Due to	: Process Activity
3 Stack Connected to	: MCL Furnace
4 Material of Construction	: M.S.
5 Stack Height from G.L.	: 45.00 m
6 Height of Sampling Port from G.L.	: 29.50 m
7 Height of Sampling Port from L.D.Z.	: ---
8 Dimension of Stack at Sampling Port	: 2.00 m
9 Shape of the Stack	: Circular Ø
10 Working Load	: ---

FUEL CHARACTERISTIC REPORT

1 Type of Fuel	: L.P.G
2 Fuel Consumption	: 571 NM ³ /hr
3 Calorific Value (K-Cal/Kg)	: ---

RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

		Method
1 Flue Gas Temperature	391 °C	IS 11255 : Part 3
2 Barometric Pressure	752 mm Hg	
3 Velocity of Flue Gas	12.32 m/sec	IS 11255 : Part 3
4 Flue Gas Quantity	59790 NM ³ / hr	IS 11255 : Part 3
5 Concentration of Particulate Matter	31.95 mg/NM ³	IS 11255 : Part 1
6 Concentration of Carbon Dioxide (%)	1.60	IS 13270
7 Concentration of SO ₂	18.68 mg/NM ³	IS 11255 : Part 2
8 Concentration of NO _x	26.90 mg/NM ³	CPCB Method
9 Volatile Organic Compound	43.47 mg/NM ³	---
10 Alkali Fumes	0.68 mg/m ³	---

***** END OF REPORT *****

Pollution Control System	: Nil
Ladder	: Permanent
Platform	: Permanent
Sampling Witnessed By	: Unit Representative

For ECO CARE

Dr. Dibyendu Banerjee
Dr. Dibyendu Banerjee
 M.Sc, M.Phil, Phd, PD
 Technical Manager/Sr. Scientist
 (Authorised Signatory)

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Phone : (0341) 2252011

(0341) 3290511

Fax : (0341) 2252011

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STACK EMISSION TEST REPORT

Report Release Date : 09.09.2014	Protocol : IS Method
Test Report No : JS/140908/209/2014/532	Sample Description : STACK EMISSION
Name of Industry : Tata Blue Scope Steel Ltd.	Type of Industry : Steel Coated Plant
At. Bara, P.O. Agrico, JAMSHEDPUR – 831 009, Jharkhand	Sampling Location : Stack Connected to D.G. Set No. 1
Customer Rep. : Mr. Samresh Kumar	Sample Stamped as : T – 649
	Sample Drawn By : ECO CARE (Mr. Rajeev Kumar & Team)
	Sampling Date : 05.09.2014

GENERAL INFORMATION

1 Particular of the Plant	: Steel Coated Plant
2 Emission Due to	: Burning of H.S.D
3 Stack Connected to	: D.G Set No. 1 (1500 KVA)
4 Material of Construction	: M.S.
5 Stack Height from G.L.	: 30.00 m
6 Height of Sampling Port from G.L.	: 7.00 m
7 Height of Sampling Port from L.D.Z.	: ---
8 Dimension of Stack at Sampling Port	: 0.35 m
9 Shape of the Stack	: Circular Ø
10 Working Load	: ---

FUEL CHARACTERISTIC REPORT

1 Type of Fuel	: H.S.D
2 Fuel Consumption	: 192 ltr/hr
3 Calorific Value (K-Cal/Kg)	: ---

RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

		Method
1 Flue Gas Temperature	280 °C	IS 11255 : Part 3
2 Barometric Pressure	752 mm Hg	
3 Velocity of Flue Gas	19.07 m/sec	IS 11255 : Part 3
4 Flue Gas Quantity	3529 NM ³ / hr	IS 11255 : Part 3
5 Concentration of Particulate Matter	83.75 mg/NM ³	IS 11255 : Part 1
6 Concentration of Carbon Dioxide (%)	5.80	IS 13270
7 Concentration of SO ₂	19.61 mg/NM ³	IS 11255 : Part 2
8 Concentration of NO _x	26.94 mg/NM ³	CPCB Method
9 Volatile Organic Compound	139.61 mg/NM ³	

***** END OF REPORT *****

Pollution Control System	: Nil
Ladder	: Permanent
Platform	: Permanent
Sampling Witnessed By	: Unit Representative

For ECO CARE


Dr. Dibyendu Banerjee
 M.Sc, M.Phil, Phd, PD
 Technical Manager/Sr. Scientist
 (Authorised Signatory)

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(0341) 3290511

Fax : (0341) 2252011

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Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

STACK EMISSION TEST REPORT

Report Release Date : 09.09.2014	Protocol : IS Method
Test Report No : JS/140908/210/2014/533	Sample Description : STACK EMISSION
Name of Industry : Tata Blue Scope Steel Ltd.	Type of Industry : Steel Coated Plant
At. Bara, P.O. Agrico	Sampling Location : Stack Connected to D.G. Set No. 2 (1500 K.V.A)
JAMSHEDPUR – 831 009, Jharkhand	Sample Stamped as : T – 650
Customer Rep. : Mr. Samaresh Kumar	Sample Drawn By : ECO CARE (Mr. Rajeev Kumar & Team)
	Sampling Date : 05.09.2014

GENERAL INFORMATION

1 Particular of the Plant	: Steel Coated Plant
2 Emission Due to	: Burning of H.S.D
3 Stack Connected to	: D.G Set No. 2 (1500 KVA)
4 Material of Construction	: M.S.
5 Stack Height from G.L.	: 30.00 m
6 Height of Sampling Port from G.L.	: 7.00 m
7 Height of Sampling Port from L.D.Z.	: ----
8 Dimension of Stack at Sampling Port	: 0.35 m
9 Shape of the Stack	: Circular Ø
10 Working Load	: ----

FUEL CHARACTERISTIC REPORT

1 Type of Fuel	: H.S.D
2 Fuel Consumption	: 192 ltr/hr
3 Calorific Value (K-Cal/Kg)	: ----

RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

Method

1 Flue Gas Temperature	292 °C	IS 11255 : Part 3
2 Barometric Pressure	752 mm Hg	
3 Velocity of Flue Gas	18.84 m/sec	IS 11255 : Part 3
4 Flue Gas Quantity	3414 NM ³ /hr	IS 11255 : Part 3
5 Concentration of Particulate Matter	86.57 mg/NM ³	IS 11255 : Part 1
6 Concentration of Carbon Dioxide (%)	6.6	IS 13270
7 Concentration of SO ₂	18.99 mg/NM ³	IS 11255 : Part 2
8 Concentration of NO _x	30.53 mg/NM ³	CPCB Method
9 Volatile Organic Compound	142.77 mg/NM ³	

***** END OF REPORT *****

Pollution Control System	: Nil
Ladder	: Permanent
Platform	: Permanent
Sampling Witnessed By	: Unit Representative

For ECO CARE


Dr. Divyendu Banerjee
 M.Sc, M.Phil, Phd, PD
 Technical Manager/Sr. Scientist
 (Authorised Signatory)

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Annexure XE

Phone : (0341) 2252011

(0341) 3290511

Fax : (0341) 2252011

email : ecocareasansol@rediffmail.com

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Manoj Talkies, (Basement Floor)

Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

STACK EMISSION TEST REPORT

Report Release Date : 30.05.2014	Protocol : IS Method
Test Report No : JS/140525/66/2014/167	Sample Description : STACK EMISSION
Name of Industry : Tata Blue Scope Steel Ltd.	Type of Industry : Steel Coated Plant
At. Bara, P.O. Agrico.	Sampling Location : Stack Connected to Primary Chamber Incinerator
JAMSHEDPUR - 831 009, Jharkhand	Sample Stamped as : T - 495
Customer Rep. : Mr. Samresh. Singh	Sample Drawn By : ECO CARE (Mr. Binod Singh & Team)
	Sampling Date : 24.05.2014

GENERAL INFORMATION

1 Particular of the Plant	: Steel Coated Plant
2 Emission Due to	: Process Activity
3 Stack Connected to	: Primary Chamber Incinerator
4 Material of Construction	: M.S.
5 Stack Height from G.L.	: 30.00 m
6 Height of Sampling Port from G.L.	: 12.00 m
7 Height of Sampling Port from L.D.Z.	: ----
8 Dimension of Stack at Sampling Port	: 1.00 m
9 Shape of the Stack	: Circular Ø
10 Working Load	: 78 Kg Solid / hr

FUEL CHARACTERISTIC REPORT

1 Type of Fuel	: L.P.G
2 Fuel Consumption	: 25-30 Kg / hr
3 Calorific Value (K-Cal/Kg)	: ----

RESULTS OF SAMPLING GASEOUS EMISSION ANALYSIS

		Method
1 Flue Gas Temperature	80 °C	IS 11255 : Part 3
2 Barometric Pressure	752 mm Hg	
3 Velocity of Flue Gas	5.20 m/sec	IS 11255 : Part 3
4 Flue Gas Quantity	10970 NM ³ / hr	IS 11255 : Part 3
5 Concentration of Particulate Matter	32.06 mg/NM ³	IS 11255 : Part 1
6 Concentration of Carbon Dioxide (%)	3.6	IS 13270
7 Concentration of SO ₂	11.48 mg/NM ³	IS 11255 : Part 2
8 Concentration of NO _x	41.94 mg/NM ³	CPCB Method

***** END OF REPORT *****

Pollution Control System : Incinerator

Ladder : Permanent

Platform : Permanent

Sampling Witnessed By : Unit Representative

For ECO CARE

Dr. Dibyendu Banerjee
Dr. Dibyendu Banerjee
 M.Sc, M.Phil, Phd, PD
 Technical Manager/Sr. Scientist
 (Authorised Signatory)

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Phone : (0341) 2252011

(0341) 3290511

Fax : (0341) 2252011

email : ecocareasansol@rediffmail.com

Manoj Talkies, (Basement Floor)

Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

EFFLUENT WATER TEST REPORT

Report Release Date : 10.09.2014	Protocol : APHA METHOD
Test Report No : JW/140908/66/2014/544	Sample Description : Surface Water
Name of Party : Tata Blue Scope Steel Ltd.	Type of Industry : Coated Steel Plant
At. Bara, P.O. Agrico	Sampling Location : E.T.P Outlet
JAMSHEDPUR – 831 009, Jharkhand	Sample Stamped as : "XX"
Customer Rep. : Mr. Samresh Kumar	Sample Quantity : 2 ltr. with sealed plastic container & 1 ltr. with sealed glass container
	Sample Drawn by : ECO CARE (Mr. Rajeev Kumar & Team)
	Sampling Date : 06.09.2014

Sl No	Parameters	Unit	Test Method (APHA 20 th Edition)	Standards	Results
1	pH at 28.1 °C		4500-H ⁺ B	5.5 – 9.0	7.21
2	Temperature	°C	2550 B	----	28.1
3	TSS	mg/l	2540 D	100.0	48.10
4	TDS	mg/l	2540 C	2100.0	426.40
5	BOD	mg/l	5210 B (3 day)	30.0	18.75
6	COD	mg/l	5220 B	250.0	70.56
7	Oil & Grease	mg/l	5220 B	10.0	3.26
8	Chromium ⁺⁶ (as Cr)	mg/l	3500 – Cr – B	0.10	0.04
9	Iron (as Fe)	mg/l	3500 – Fe B	3.0	0.14
10	Zinc (as Zn)	mg/l	3500 – Zn B	5.0	0.28

***** END OF REPORT *****

Remarks : Nil

For ECO CARE

Dr. Dibyendu Banerjee

M.Sc, M.Phil, Phd, PD

Technical Manager/Sr. Scientist

(Authorised Signatory)

Sampling Witnessed by : Party

NOTE: 1) This certificate refers to the values obtained at the time of testing and results related to the items tested.

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Eco Care

Specialised House on Environmental Monitoring, Analysis, Assessment & Management

Phone : (0341) 2252011

(0341) 3290511

Fax : (0341) 2252011

email : ecocareasansol@rediffmail.com

Manoj Talkies, (Basement Floor)

Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

WATER QUALITY TEST REPORT

Report Release Date : 15.09.2014	Protocol : APHA METHOD
Test Report No : JDW/140912/48/2014/574	Sample Description : Ground Water
Name of Party : Tata Blue Scope Steel Ltd.	Sampling Location : Bore Well, Near Temple
	Type of Industry : Coated Steel Plant
At. Bara, P.O. Agrico, JAMSHEDPUR – 831 009, Jharkhand	Sample Stamped as : 'ZZ'
	Sample Quantity : 2 ltr. with sealed plastic container & 1 ltr. with sealed glass container
Customer Rep. : Mr. Samresh Kumar	Sample Drawn by : ECO CARE (Mr. Rajeev Kumar & Team)
	Sampling Date : 06.09.2014

Sl. No.	Parameters	Unit	Test Method (APHA 20 th Edition)	Standards	Results
1	pH at 28.0 °C		4500-H ⁺ B	6.5 – 8.5	6.68
2	Turbidity	NTU	2130 B	5.0	0.40
3	Total Alkalinity (as CaCO ₃)	mg/l	2320 B	200.0	111.30
4	Chloride (as Cl)	mg/l	4500 – Cl ⁻ B	250.0	68.98
5	Total Hardness (as CaCO ₃)	mg/l	2340 C	300.0	210.12
6	Fluoride (as F)	mg/l	4500 F – B/D	1.0	0.49
7	Arsenic (as As)	mg/l	3500 As – B	0.05	< 0.05
8	Calcium (as Ca)	mg/l	3500 – Ca B	75.0	55.32
9	Chromium ⁺⁶ (as Cr)	mg/l	3500 – Cr – B	0.05	0.03
10	Iron (as Fe)	mg/l	3500 – Fe B	0.3	0.15
11	Magnesium (as Mg)	mg/l	3500 – Mg B	30.0	17.52
12	Coliform	MPN/100ml	9221 C	----	< 2.0
13	Zinc (as Zn)	mg/l	3500 – Zn B	5.0	< 0.10
14	T. Chromium	mg/l	3500 – Cr B	----	0.04

***** END OF REPORT *****

Sampling Witnessed by : Party

For ECO CARE


Dr. Dibyendu Banerjee
M.Sc, M.Phil, Phd, PD
Technical Manager/Sr. Scientist
(Authorised Signatory)

Remarks : Nil

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Annexure XIB

Phone : (0341) 2252011

(0341) 3290511

Fax : (0341) 2252011

email : ecocareasansol@rediffmail.com

Manoj Talkies, (Basement Floor)

Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

EFFLUENT WATER TEST REPORT

Report Release Date : 10.09.2014	Protocol : APHA METHOD
Test Report No : JW/140908/65/2014/543	Sample Description : Surface Water
Name of Party : Tata Blue Scope Steel Ltd.	Type of Industry : Coated Steel Plant
At. Bara, P.O. Agrico	Sampling Location : Subarnarekha River
JAMSHEDPUR – 831 009, Jharkhand	Sample Stamped as : "W"
Customer Rep. : Mr. Samresh Kumar	Sample Quantity : 2 ltr. with sealed plastic container & 1 ltr. with sealed glass container
	Sample Drawn by : ECO CARE (Mr. Rajeev Kumar & Team)
	Sampling Date : 06.09.2014

Sl No	Parameters	Unit	Test Method (APHA 20 th Edition)	Standards	Results
1	pH at 28.3 °C		4500-H ⁺ B	5.5 – 9.0	7.52
2	Temperature	°C	2550 B	----	28.3
3	TSS	mg/l	2540 D	100.0	57.50
4	TDS	mg/l	2540 C	2100.0	238.20
5	BOD	mg/l	5210 B (3 day)	30.0	10.95
6	COD	mg/l	5220 B	250.0	30.24
7	Oil & Grease	mg/l	5220 B	10.0	2.16
8	Arsenic (as As)	mg/l	3500 As – B	0.20	< 0.05
9	Chromium ⁺⁶ (as Cr)	mg/l	3500 – Cr – B	0.10	0.02
10	Iron (as Fe)	mg/l	3500 – Fe B	3.0	0.10
11	Total Chromium	mg/l	3500 – Cr B	----	0.03

***** END OF REPORT *****

Remarks : Nil

For ECO CARE


Dr. Dibyendu Banerjee
M.Sc, M.Phil, Phd, PD
Technical Manager/Sr. Scientist
(Authorised Signatory)

Sampling Witnessed by : Party

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email : ecocareasansol@rediffmail.com

Manoj Talkies, (Basement Floor)

Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

WATER QUALITY TEST REPORT

Report Release Date : 15.09.2014	Protocol : APHA METHOD
Test Report No : JDW/140912/49/2014/575	Sample Description : Surface Water
Name of Party : Tata Blue Scope Steel Ltd.	Sampling Location : Canteen
At. Bara, P.O. Agrico	Type of Industry : Coated Steel Plant
JAMSHEDPUR – 831 009, Jharkhand	Sample Stamped as : 'YY'
Customer Rep. : Mr. Samresh Kumar	Sample Quantity : 2 ltr. with sealed plastic container
	Sample Drawn by : ECO CARE (Mr. Rajeev Kumar & Team)
	Sampling Date : 06.09.2014

Sl. No.	Parameters	Unit	Test Method (APHA 20 th Edition)	Standards	Results
1	pH at 28.2 °C		4500-H ⁺ B	6.5 – 8.5	7.65
2	TDS	mg/l	2540 C	500.0	285.90
3	Turbidity	NTU	2130 B	5.0	0.30
4	Total Alkalinity (as CaCO ₃)	mg/l	2320 B	200.0	116.60
5	Chloride (as Cl)	mg/l	4500 – Cl ⁻ B	250.0	40.41
6	Total Hardness (as CaCO ₃)	mg/l	3500 As – B	300.0	107.12
7	Sulphate (as SO ₄ ⁻)	mg/l	4500 – SO ₄ ²⁻ E	200.0	16.76
8	Calcium (as Ca)	mg/l	3500 – Ca B	75.0	28.07
9	Iron (as Fe)	mg/l	3500 – Fe B	0.3	0.06
10	Magnesium (as Mg)	mg/l	3500 – Mg B	30.0	9.01
11	Zinc (as Zn)	mg/l	3500 Zn B	5.0	N.D.

***** END OF REPORT *****

Sampling Witnessed by : Party

For ECO CARE


Dr. Dibyendu Banerjee

M.Sc, M.Phil, Phd, PD

Technical Manager/Sr. Scientist
(Authorised Signatory)

Remarks : Nil

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(0341) 3290511

Fax : (0341) 2252011

Manoj Talkies, (Basement Floor)

Kumarpur, Asansol - 713304

Dist. Burdwan (West Bengal)

Eco Care

Specialised House on Environmental Monitoring, Analysis, Assessment & Management

SOIL ANALYSIS TEST REPORT

Report Release Date : 30.09.2013	Protocol : APHA METHOD
Test Report No : JSL/130935/05/2013/745	Sample Description : Soil
Name of Party: Tata Blue Scope Steel Ltd. At. Bara, P.O. Agrico, JAMSHEDPUR - 831 009, Jharkhand	Sampling Location : Near Parking Area
	Sample drawn by : ECO CARE (Mr. Ranjeet Yadav)
	Sampling Date : 27.09.2013

<u>Sl. No.</u>	<u>Analysis Parameters</u>	<u>Result</u>
1.	p ^H	5.57
2.	Moisture Content	5.91 %
3.	Organic Matter	0.68 %
4.	Chloride	8.77 %
5.	Iron	3.02 %

***** END OF REPORT *****

Any Specific Requirements : Nil

Remarks : Nil

Physical Test Witnessed by : NA

For **ECO CARE**

Dr. Dibyendu Banerjee
Dr. Dibyendu Banerjee
 M.Sc, M.Phil, Phd, PD
 Technical Manager/Sr. Scientist
 (Authorised Signatory)

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Serial No	Finacial Year	Production in MT
1	2010-2011	Nil
2	2011-2012	11798
3	2012-2013	121100
4	2013-2014	156215.05
5	2014-2015(till Sep 14)	93886