



To,  
Director  
I. A. Division (Industry)  
Ministry of Environment, Forests & Climate Change  
Indira Paryavaran Bhavan  
Jor Bagh Road, Aliganj,  
New Delhi – 110003

TBSL / HSE / MoEF /262/2020

**Date: 20<sup>th</sup> Nov'2020**

**Your Ref:** F. No. J-11011/271/2007-IA II (I)  
**Sub:** Half Yearly Compliance Report

Sir,

This is in reference to Ministry of Environment & Forests letter no. F. No. J-11011/271/2007-IA II (I) dated 24<sup>th</sup> August 2007 and Jharkhand Pollution Control Board Letter No. JA/2655/W/332 dated 01<sup>st</sup> Feb 2007 to M/s Tata BlueScope Steel Pvt. Ltd for Environment Clearance with certain conditions to establish factory premises for Metal Coating and Colour Coating Line at Bara, East Singhbhum, Jamshedpur (Jharkhand).

Please find enclosed the half yearly compliance report {H1 (FY20-21)} for your kind information.

Thanking you

Sincerely yours

For Tata BlueScope Steel Pvt. Ltd.

*abhadra*

(Factory Manager – Coated Steel Business)

Encl: As Above

Copy to:-

1. The Secretary, Jharkhand State Pollution Control Board, Town Administration Division Building (Ground Floor), H. E. C., Dhurwa, Ranchi - 834004, Jharkhand
  2. The Chairman, Central Pollution Control Board, Parivesh Bhavan CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110032
  3. The Chairman, Jharkhand State Pollution Control Board, Town Administrative Division Building (Ground Floor) H.E.C., Dhruwa, Ranchi – 824004, Jharkhand
  4. The Chief Conservator of Forests (Eastern), Regional Office (EZ), A/3, Chandrasekharpur, Bhubaneswar – 751023, Orissa.
  5. Ministry of Environment, Forest & Climate Change Regional Office (Eastern Central Zone), Bungalow No. A-2, Shyamali Colony, Ranchi-834002.
  6. The Additional Director Monitoring Cell, Ministry of Environment, Forests & Climate Change Indira Paryavaran Bhavan, Jor Bagh Road, Aliganj, New Delhi – 110003
- : Vice President Corporate Services, Tata Steel Limited, Jeevan Bharti Building, Tower # 1, 10<sup>th</sup> Floor, 124 Connaught Circus, New Delhi (110001)

**Tata BlueScope Steel Pvt. Limited**

Coated Steel Plant, Bara P.O. Agrico, Jamshedpur-831009, India

Telephone : +91 657 662 4200 Fax : 91 657 662 4270

www.tatabluescopesteel.com

**Agency: Ministry of Environment & Forest - Compliance Report H1 FY(20-21)**

**(A) SPECIFIC CONDITIONS**

Sl. No.	Conditions	Compliance
1	<p>a. Total Water requirement from River Subamarekha shall not exceed 2,160 m<sup>3</sup>/day and</p> <p>b. Waste water generation shall not exceed 1106 m<sup>3</sup>/day respectively.</p> <p>c. Effluent Treatment plant passivation section shall be treated separately to reduce Cr+6 into Cr+3 and its proper storage after dewatering in separate secured landfill (SLF).</p> <p>d. Closed circuit cooling water system shall be adopted in cooling towers to reduce consumption of water.</p> <p>e. All the treated effluent shall be monitored for pH, TSS, TDS, volatile dissolved solids, COD, BOD, heavy metals and other relevant parameters like presence of solvents etc. and used for horticulture purposes or secondary usage.</p>	<p>a. We don't draw any water from river Subamarekha. We buy industrial and drinking (domestic) water from Jamshedpur Utility Services Company Ltd. (JUSCO) within our permitted consumption of 2160 M<sup>3</sup>/day, a copy of the same is attached in Annexure I. Present water consumption from April'20 to Sep'20 is Industrial 345.55 Cub M/Day and Domestic 53.71 Cub M/Day.</p> <p>b. Waste water generation per day average 266.03 Cub M / Day.</p> <p>c. Expected treatment plant has been installed and it is in operation. After treatment of Cr+6, Cr+3 sludge is being stored in the leaching pond called SLF after dewatering.</p> <p>d. Close circuit cooling tower has been installed.</p> <p>e. Expected parameter are being monitored a copy of treated effluent attached in annexure-II. Treated water being used for horticulture.</p>
2	<p>The ground water quality in and around the unit and the hazardous waste disposal site / secured landfill (SLF) shall be regularly monitored and the data recorded to ensure that there is no contamination of the ground water.</p>	<p>The layout and the design of ground water monitoring station as well as the secured landfill have been implemented. A copy is attached as Annexure III of SLF Annexure IIIA of ground water sample location. Necessary ground water sample has been taken from plant premises near to Secured Land Fill site, A copy is attached as annexure-III A. Ground water testing has been done from NABL certified Lab.</p>
3	<p>a. Hazardous waste (Chrome sludge, Trivalent Chromium) shall be disposed off in secured landfill (SLF).</p> <p>b. Spent paint shall be provided to the paint manufacturers.</p> <p>c. Aluminum and Zinc metal dross shall be sold to authorised entrepreneurs only. And</p> <p>d. Incinerator shall be installed to incinerate ETP sludge, waste paint, oil wastes etc. and waste heat recovered shall be used in the process. air emissions from the incinerator shall be controlled by installing proper air pollution control equipment's to meet the CPCB standards and guidelines. the destructive efficiency of the incinerator shall be assessed time to time by approved agency and a report submitted to the ministry.</p>	<p>a. Hazardous waste (Chrome sludge, Trivalent Chromium) being disposed off in secured landfill (SLF).</p> <p>b. Spent Paint is sending to authorised vendor.</p> <p>c. Aluminum and Zinc metal dross sailing to authorised vendor.</p> <p>d. Hazardouse waste ETP sludge, oil &amp; grease socked cotton, paint &amp; thinner socked cotton etc. It is being incinerated in our Incinerator.</p>

*abhadur,*



(B). GENERAL CONDITIONS		
i)	The plant authorities shall strictly adhere to the stipulations made by the Jharkhand State Pollutions Control Board (JSPCB) and the State Government.	TBSPL is committed to adhere stipulations made by the Jharkhand State Pollutions Control Board (JSPCB) and the State Government. JSPCB had issued Consent to Establish (NOC) vide ref NO JA/ 2655/w/332. Dated 01.02.07 and Consent to Operate vide ref No.JSPCB/HO/RNC/CTO-6536632/2020/346.Dated 07.02.2020. Consent for Hazardous waste authorisation applied for renewal, application no:7564444 dated 11.02.2020. All clearances of JSPCB attached as Annexure - IV,IVA, and IVB.
ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Shall follow the Norms
iii)	The gaseous emissions from various process units shall conform to the load mass based standards notified by this Ministry on 19th may 1993 and standards prescribed from time to time. The state Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and locations. At no time, the emission level shall go beyond the prescribed standards. interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	The plant design includes fumes extractor, fumes will be burnt in the incinerator before it goes to air through stacks. Gaseous emission from process is designed as per MoEF standards and maintained and as per standards (Air - Prevention & Control of Pollution Act, 1981). The interlocks in process for protecting environment for unburnt gases are as follows. For Coil Paint Line, the paint line will start coating only when oxidizer temp. is above 650°C which is more than the incineration temp. of paint fumes. For Metal Coating Line, in the exhaust duct there is burner for burning the unburnt gases & purging excess air for destroy CO from flue gases. This is basic requirement to run the furnace.
iv)	Fume extraction system shall be provided to collect solvent vapors (VOCs) and shall be incinerated in incinerator to mitigate odour pollution. Fume extraction system shall also be provided to alkali degreasing section and chrome passivation both to extract alkali and acid droplets.	Fume extraction system is designed for Solvent vapors incineration and for alkali & Chromate with a water scrubber
v)	At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO <sub>2</sub> and NO <sub>x</sub> are anticipated in consultation with JSPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar, JSPCB and CPCB once in six months.	Four Ambient Air quality monitoring station established. data being submitted with this report .AAQ report attached as annexure V, VA, VB, and stack emission monitoring report attached as Annexure VI, VIA, VIB, VIC, VID & VIE Monitoring of PM <sub>2.5</sub> and other parameters as specified in the notification GSR 826 (E) date 16.11.2009.
vi)	In plant control measures for checking fugitive emission from all the vulnerable sources shall be provided. Further specific measures like water sprinkling shall be carried out and fugitive emissions shall be controlled, regularly monitored and records maintained.	N.A



vii)	Secondary fugitive emissions shall be controlled within the latest permissible limits issued the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.	N.A
viii)	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilised for plantation purpose.	ETP is designed to take care of Environmental norms. The treated water is used for gardening.
ix)	The plant authorities shall strictly comply with the rules and regulations under manufacture, storage and Import of Hazardous Chemical Rules, 1989 as amended in October 1994 and January 2000 and Hazardous Wastes (Management and Handling) Rules, 2003. Authorisation from the Jharkhand SPCB must be obtained for collection / treatment / storage / disposal of hazardous wastes. No hazardous waste shall be sold.	Requirements under manufacture, storage and Import of Hazardous Chemical Rules, 1989 as amended in October 1994 and January 2000 are being complied. Consent for Hazardous waste authorisation applied for renewal on 11.02.2020. Document is attached as Annexure IV B.
x)	Occupational health surveillance of the workers shall be done on regular basis and records maintained as per the Factories Act.	Occupational health surveillance of the workers are being done as per the Factories Act. We are attaching details as annexure VII and VIIA, VIIB & VIIC.
xi)	The company shall develop surface as well as ground water harvesting structures to harvest the rainwater for utilisation in the lean season besides recharging the ground water table.	Detailed design of rainwater harvesting plan attached as Annexure-VIII.
xii)	As proposed, green belt shall be developed 8 ha (33%) out of total 24 ha to mitigate the effect of fugitive emissions all around the plant as per the CPCB guidelines.	Plantation drives are taken continuously around the factory campus. The survival rate of plants is low due to soil condition of reclaimed land. We'd continue our effort in this direction. However area has been developed as green belt. Plant layout showing green belt developed till date attached as Annexure-IX, details of plats, shrubs and and maintenance cost of green belt attached as annexure IX, IX-A & IX-B.
xiii)	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	All equipment are designed in accordance with EPA Rules 1989 for control of noise levels. Acoustic enclosures for DG sets noise monitoring done report is attached as annexure- X.
xiv)	Recommendations made in the Corporate Responsibility for Environment Conservation (CREP) issued for the steel plants shall be implemented.	Details of the equipment's installed and practices put in place or proposed for compliance of CREP attached as Annexure - XI.
xv)	Occupational health surveillance of the workers shall be done on regular basis and records maintained as per the Factories Act.	Currently we have some crane operators who work under contractor whose occupational health is being monitored and we are attaching details of health check-up till date. We are attaching our future scheme provision and plans to be done under occupational Health. We are attaching details as annexure VII, VIIA, VIIB and VIIC.





xvi)	The plant proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report.	Being complied
xvii)	The company must undertake socio-economic developments activities in the surrounding villages like community development programmes, educational programmes. Drinking water supply and health care etc.	Tabular details of CSR done and envisaged is attached as Annexure - XII.
xviii)	The Regional Office of this Ministry at Ranchi / CPCB / SPCB will monitor the stipulated conditions. A six monthly compliance report and the monitoring data along with statistical interpretation shall be submitted to them regularly.	Due to Covid-19 pandemic and Lockdown environmental monitoring has not been done from April'20 to June'20. Monitoring has been started from July'20. Statistical interpretation of environmental data being submitted with this report . AAQ report including Monitoring of PM10,PM2.5 and other parameters as specified in the notification GSR 826 (E) date 16.11.2009 as Annexure V,VA,VB & VC. Report for month of July-20 as Annexure Report of Aug-20 as Annexure VA, Report of Sep-20 as Annexure VB. Statical analysis of AAQR is attached as Annexure VC. Report of stack emission is being attached as Annexure VI, VIA, VIB, VIC, VID & VIE. We are submitting Noise Level Report as Annexure Ground water Quality Report as IIIA, effluent water quality report as annexure II , Surface water quality test report as XIII & XIII A and Soil Analysis report as annexure XIV.
xix)	The Plant Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with JSPCB / Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.n">http://envfor.nic.n</a> . this shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the regional office.	Complied
xx)	Plant authorities should inform the Regional Offices as well as the Ministry, the date of Financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Complied

*abhaduri,*





## TAX INVOICE

Original for recipient

 <b>JUSCO</b>		<b>TATA STEEL</b>				
Utility Bill Cum Notice		Jamshedpur				
NAME & ADDRESS		BILL DETAILS				
Recipient (BP) No.	0010036650-Consumer No0032865	Bill Type	Periodic Bill	Bill No. :	003018063381	
Recipient (BP) Name	TATA BLUE SCOPE STEEL LTD. .	Payment Due Date (Current Bill)	20-10-2020			
Address	BLUSC OLD DAIRY FARM AGRICO / SIDHGORA JAMSHEDPUR-831009	No. of Pages	01 of 01			
		Old Balance (Rs.)	0			
		Total of all pages (Rs.)	81148.64			
Jharkhand GST State Code - 20 Recipient GSTIN - 20AACCB5628E1Z9		Previous Outstanding (Rs.)	8358.35			
Phone No	-	<b>GRAND TOTAL (RS.)</b>		<b>89506.99</b>		
Email Address	-	TSL GSTIN - 20AAACT2803M2Z0				
Contracted Demand	0	Period of Bill		25-08-2020 to 25-09-2020		
Bill Date	29-09-2020	Bill Month				
Security Deposit Amount (Elec.)	0	Connection Charges Due (Water)	0			
METER DETAIL AND CONSUMPTION HISTORY						
ELECTRICITY			WATER			
Meter & MR Details		Consumption History	Meter & MR Detail		Consumption History	
Rate Category	-		Rate Category	METERED-INDUSTRIAL		
Meter Sl. No.	-		Meter Sl. No.	8A01A120000	Month	KL
Meter Card No.	-	Month	Meter Card No.	8A01A120000	AUG	
M.F.	-	AUG	M.F.	1.0	JUL	
Meter Status	-	JUL	Meter Status	CONNECTED	JUN	
Reading Status	-	JUN	Reading Status	OK	MAY	
Current. Rdg. Dt.	---	MAY	Current Rdg. Dt.	25-09-2020	APR	
Last Rdg. Dt.	---	APR	Last Rdg. Dt.	26-08-2020	MAR	
		MAR				
Current Rdg.	-	KWH	Current Rdg.	58215.0	KL	Meter Size (mm)
Last Rdg.	-	KWH	Last Rdg.	55763.0	KL	100 mm
Electricity Charges			Water Charges		CGST	SGST
Consumed Units (KWH)		0.00	Charged Units (KL)	2416.00		
Consumed KVAH		0.00	Consumed/ Flat Charges (Rs.)	80440.64		
Power Factor		0	Meter Hire Charges (Rs.)	0	0	0
Load factor (%)		0	Meter Service Charges (Rs.)	600	54	54
Energy Charges (Rs.)		0	Building Status	0		
Jharkhand Electricity Duty (Rs.)		0	Any Other Charges (Rs.)	0	0	0
Employee Energy charges (Rs.)		0	<b>TOTAL WATER (B)</b>	81148.64	54	54
Fixed/Demand Charges (Rs.)		0	Non Taxable Rent (Rs.)	0	-	-
Meter Hire Charges (Rs.)		0	Taxable Rent (Rs.)	0	0	0
Voltage Rebate (Rs.)		0	Municipal Contribution (Rs.)	0	0	0
Power Factor Surcharge/Rebate (Rs.)		0	Conservancy Charges (Rs.)	0	0	0
Load factor Surcharge/Rebate (Rs.)		0	Miscellaneous Charges (Rs.)	0	0	0
FPPPA Charges (Rs.)		0	GST Rate	0	9%	9%
Adjustment for Excess Demand (Rs)		0	Any Other Charges (Rs.)	0	0	0
Any Other Charges (Rs.)		0	<b>TOTAL OTHERS (C)</b>	0	0	0
<b>TOTAL ELECTRICITY (A)</b>		0	<b>BILL AMOUNT=(A+B+C)</b>	81148.64	54	54
<b>Last Payment Detail</b>	<b>Establishment No.</b>	1610100BLUSC099	<b>Service No. :-</b>	NP		
Receipt No.	1786752	Receipt Date	27-06-2014	Receipt Amount	11829.16	
Cheque No./Date	000233		20-6.-19.0	Bank Name	HDFC BANK	
<b>Dear Consumer, Please pay your bill within due date. Pay On-Line, Stay Safe.</b>						
<b>For Counter use</b>						
<b>For Counter use</b>	<b>Establishment No.</b>	1610100BLUSC099	<b>Service No.</b>	-		
<b>Business Partner No.</b>	0010036650-Consumer No0032865					
Bank Name/Branch				<b>Bill No.</b>	003018063381	
Cheque No./Date				<b>Bill Date</b>	29-09-2020	
Signature (Cashier)				<b>Amount Payable</b>	89506.99	

## TAX INVOICE

 <b>JUSCO</b>		<b>TATA STEEL</b>					
Utility Bill Cum Notice Jamshedpur							
NAME & ADDRESS			BILL DETAILS				
Recipient (BP) No.	0010036646-Consumer No0032861		Bill Type	Periodic Bill	Bill No. : 003018063382		
Recipient (BP) Name	TATA BLUE SCOPE STEEL LTD. .		Payment Due Date (Current Bill)	20-10-2020			
Address	BLUSC NEAR BARA SEWAGE AGRICO / SIDHGORA JAMSHEDPUR-831009		No. of Pages	01 of 01			
			Old Balance (Rs.)	0			
			Total of all pages (Rs.)	443757.6			
Jharkhand GST State Code - 20 Recipient GSTIN - 20AACB5628E1Z9			Previous Outstanding (Rs.)	130559.87			
Phone No	-		<b>GRAND TOTAL (RS.)</b>		<b>574317.47</b>		
Email Address	-		TSL GSTIN - 20AAACT2803M2Z0				
Contracted Demand	0		Period of Bill				
Bill Date	29-09-2020	Bill Month	25-08-2020 to 25-09-2020				
Security Deposit Amount (Elec.)	0		Connection Charges Due (Water)	0			
METER DETAIL AND CONSUMPTION HISTORY							
ELECTRICITY			WATER				
Meter & MR Details		Consumption History		Meter & MR Detail		Consumption History	
Rate Category	-			Rate Category	CLARIFIED INDUSTRIAL		
Meter Sl. No.	-			Meter Sl. No	8B00D020000	Month	KL
Meter Card No.	-	Month	KWh	Meter Card No	8B00D020000	AUG	
M.F.	-	AUG	0	M.F	1.0	JUL	
Meter Status	-	JUL	0	Meter Status	CONNECTED	JUN	
Reading Status	-	JUN	0	Reading Status	OK	MAY	
Current. Rdg. Dt.	---	MAY	0	Current Rdg. Dt.	25-09-2020	APR	
Last Rdg.Dt.	---	APR	0	Last Rdg.Dt	26-08-2020	MAR	
		MAR	0				
Current Rdg.	-	KWH		Current Rdg	361037.0	KL	Meter Size (mm)
Last Rdg.	-	KWH		Last Rdg.	342073.0	KL	300 mm
Electricity Charges				Water Charges		CGST	SGST
Consumed Units (KWH)	0.00		Charged Units (KL)	18964.00			
Consumed KVAH	0.00		Consumed/ Flat Charges (Rs.)	443757.6			
Power Factor	0		Meter Hire Charges (Rs.)	0		0	0
Load factor (%)	0		Meter Service Charges (Rs.)	0		0	0
Energy Charges (Rs.)	0		Building Status	0			
Jharkhand Electricity Duty (Rs.)	0		Any Other Charges (Rs.)	0		0	0
Employee Energy charges (Rs.)	0		<b>TOTAL WATER (B)</b>	443757.6		0	0
Fixed/Demand Charges (Rs.)	0		Non Taxable Rent (Rs.)	0		-	-
Meter Hire Charges (Rs.)	0		Taxable Rent (Rs.)	0		0	0
Voltage Rebate (Rs.)	0		Municipal Contribution (Rs.)	0		0	0
Power Factor Surcharge/Rebate (Rs.)	0		Conservancy Charges (Rs.)	0		0	0
Load factor Surcharge/Rebate (Rs.)	0		Miscellaneous Charges (Rs.)	0		0	0
FPPPA Charges (Rs.)	0		GST Rate	0		9%	9%
Adjustment for Excess Demand (Rs)	0		Any Other Charges (Rs.)	0		0	0
Any Other Charges (Rs.)	0		<b>TOTAL OTHERS (C)</b>	0		0	0
<b>TOTAL ELECTRICITY (A)</b>	0		<b>BILL AMOUNT=(A+B+C)</b>	443757.6		0	0
<b>Last Payment Detail</b>	<b>Establishment No.</b>		1610300BLUSC099	<b>Service No. :-</b>		NP	
<b>Receipt No.</b>	1786753	<b>Receipt Date</b>		27-06-2014	<b>Receipt Amount</b>		121219.2
<b>Cheque No./Date</b>	000233			20-6.-19.0	<b>Bank Name</b>		HDFC BANK
<b>Dear Consumer, Please pay your bill within due date. Pay On-Line, Stay Safe.</b>							
<b>For Counter use</b>							
<b>For Counter use</b>		<b>Establishment No.</b>		1610300BLUSC099	<b>Service No.</b>		-
<b>Business Partner No.</b>	0010036646-Consumer No0032861						
Bank Name/Branch					<b>Bill No.</b>	003018063382	
Cheque No./Date					<b>Bill Date</b>	29-09-2020	
Signature (Cashier)					<b>Amount Payable</b>	574317.47	
					<b>Payment Due Date (Current Bill)</b>	20-10-2020	



# ENVIRONMENTAL LABORATORIES &

Annexure-II



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA  
HATIA, RANCHI-834003 (JHARKHAND)

Email: [info@elespl.com](mailto:info@elespl.com) ; [eles.ranchi@gmail.com](mailto:eles.ranchi@gmail.com)

GST NO:- 20AAECE9713D1Z4 Phone no : 0651-2290103

## ENGINEERING SERVICES PVT. LTD.

ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED

NABL Accreditation & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis

IN: U74999JH2018PTC011125

### TEST REPORT OF WATER QUALITY

Test Report No. : ELES/RNC/2020/662		Report Release Date : 20.10.2020	
Service Order No : 8210003577/CS4		Service Order Date : 31.07.2020	
URL No. : TC88392000000046P		Schedule : Monthly	
<b>CUSTOMER DETAILS</b>		<b>SAMPLE DETAILS</b>	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No	: ELES/RNC/2020/EF/48
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Sampling Date	: 15.09.2020
		Sample Received Date	: 16.09.2020
Plant Status	: Operational	Type of Sample	: Effluent Water
		Source of Sample/Location	: ETP outlet
Period of Analysis	: 16.09.2020 to 14.10.2020	Sampling Procedure	: ELES/DOC/SMPL/01
		Sample Collected By	: ELES Pvt.Ltd
		Sample Condition	: Sealed & Preserved

#### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS	LIMITS CPCB-Dis.Land for Irrigation
pH (at 24.7 °C)	--	APHA 23 <sup>rd</sup> Edition, 4500-H <sup>+</sup> -B	7.4	5.5-9.0
Conductivity (at 24.7 °C)	µS/cm	APHA 23 <sup>rd</sup> Edition, 2510 B	3290	--
Total Suspended Solids (TSS)	mg/l	APHA 23 <sup>rd</sup> Edition, 2540 D	5.2	200
Total Dissolved Solids (TDS)	mg/l	APHA 23 <sup>rd</sup> Edition, 2540 C	2210	2100
Volatile Dissolved Solids**	mg/l	IS 3025 (Part-18):1984	224.6	--
Total Alkalinity	mg/l	IS 3025 (Part-23):1986:RA 2014	300	--
Chloride as Cl	mg/l	IS 3025 (Part-32): 1988: RA 2014	532.7	600
Total Hardness	mg/l	APHA 23 <sup>rd</sup> Edition, 2340 C	117.3	--
Chemical Oxygen Demand (COD)	mg/l	IS 3025 (Part-58): 2006: RA 2017	22.8	--
Biological Oxygen Demand (BOD) (for 3 days at 27 °C)	mg/l	IS 3025 (Part-44): 1993: RA 2014	3.7	100
Oil & Grease	mg/l	APHA 23 <sup>rd</sup> Edition, 5520 B	2.3	10
Sulphate as SO <sub>4</sub>	mg/l	IS 3025 (Part-24):1986:RA 2014	27.7	1000
Nitrate as NO <sub>3</sub> **	mg/l	APHA 23 <sup>rd</sup> Edition, 4500 B	8.5	--
Phenols as C <sub>6</sub> H <sub>5</sub> OH**	mg/l	APHA 23 <sup>rd</sup> Edition, 5530 D	B.D.L(D.L:0.05)	--
Cyanide as CN**	mg/l	APHA 23 <sup>rd</sup> Edition, 4500 C&E/F	B.D.L(D.L:0.02)	0.2
Bio Assay**	--	IS 6582 (Part -2): 2001	100% Survival of fish in 100% Samples after 96 hours	90% Survival of fish in 100% Samples after 96 hours

"Saving Environment will only save the Future"





# ENVIRONMENTAL LABORATORIES &

Annexure-II



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA  
HATIA, RANCHI-834003 (JHARKHAND)

Email: [info@elespl.com](mailto:info@elespl.com); [eles.ranchi@gmail.com](mailto:eles.ranchi@gmail.com)

GST NO:- 20AAECE9713D124 Phone no : 0651-2290103

**ENGINEERING SERVICES PVT. LTD.**

ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED

NABL Accreditation & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis

IN: U74999JH2018PTC011125

## TEST REPORT OF WATER QUALITY

Test Report No. : ELES/RNC/2020/663	Report Release Date : 20.10.2020
Service Order No. : 8210003577/CS4	Service Order Date : 31.07.2020
URL No. : TC883920000000047P	Schedule : Half Yearly
<b>CUSTOMER DETAILS</b>	
Customer Name : Tata Blue Scope Steel Limited	Sample Ref. No. : ELES/RNC/2020/EF/48
Address : At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Sampling Date : 15.09.2020
	Sample Received Date : 16.09.2020
Plant Status : Operational	Type of Sample : Effluent Water
	Source of Sample/Location : ETP outlet
Period of Analysis : 16.09.2020 to 14.10.2020	Sampling Procedure : ELES/DOC/SMPL/01
	Sample Collected By : ELES Pvt.Ltd
	Sample Condition : Sealed & Preserved

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS	LIMITS CPCB-Dis.Land for Irrigation
Temperature	°C	IS 3025 (Part -9):1984	25.8	--
Colour*	Hazen	IS 3025 (Part-04): 1983	5	--
Odour**	--	IS 3025 (Part-05): 1983	Unobjectionable	Unobjectionable
Free Ammonia as NH <sub>3</sub> *	mg/l	APHA 23 <sup>rd</sup> Edition, 4500 B&C	B.D.L(D.L:0.5)	--
Kjeldahel Nitrogen as N*	mg/l	APHA 23 <sup>rd</sup> Edition, 4500 Norg-A &B	B.D.L(D.L:1.0)	--
Fluoride as F	mg/l	APHA 23 <sup>rd</sup> Edition,4500-F-D	0.4	--
Dissolved Phosphate as P*	mg/l	APHA 23 <sup>rd</sup> Edition, 4500-P-D	B.D.L(D.L:0.1)	--
Sulphide as S*	mg/l	APHA 23 <sup>rd</sup> Edition, 4500 F	B.D.L(D.L:2.0)	--
Ammonical Nitrogen as NH <sub>3</sub> -N	mg/l	IS 3025(Part-34):1988;RA2014	B.D.L(D.L:0.1)	--
Hexavalent Chromium as Cr 6+*	mg/l	APHA 23 <sup>rd</sup> Edition, 3500-Cr B	B.D.L(D.L:0.02)	--
Vanadium as V*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	6.42	--
Hydrazine as N <sub>2</sub> H <sub>4</sub> *	mg/l	ASTM D-1385 - 07	B.D.L(D.L:0.005)	--

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

- Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.  
2. (\*\*) - Parameters are not under NABL Scope.

Authorised Signatory  
Dr. Deependra Kumar Sinha  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager



# ENVIRONMENTAL LABORATORIES &

Annexure-II



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA  
HATIA, RANCHI-834003 (JHARKHAND)

Email: [info@elespl.com](mailto:info@elespl.com) ; [eles.ranchi@gmail.com](mailto:eles.ranchi@gmail.com)

GST NO:- 20AAECE9713D1Z4 Phone no : 0651-2290103

ENGINEERING SERVICES PVT. LTD.

ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED

NABL Accreditation & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis

IN: U74999JH2018PTC011125

## TEST REPORT OF WATER QUALITY

Test Report No.	: ELES/RNC/2020/662	Report Release Date	: 20.10.2020	
Service Order No.	: 8210003577/CS4	Service Order Date	: 31.07.2020	
URL No.	: TC883920000000046P	Schedule	: Monthly	
PARAMETER	Units	TEST PROTOCOL	RESULTS	LIMITS CPCB-Dis.Land for Irrigation
Iron as Fe*	mg/l	APHA 23 <sup>rd</sup> Edition, 3120 B	0.047	--
Zinc as Zn*	mg/l	APHA 23 <sup>rd</sup> Edition, 3120 B	0.011	--
Total Chromium as Cr*	mg/l	APHA 23 <sup>rd</sup> Edition, 3120 B	0.426	--

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

Remarks: 1. pH done at Lab.

2. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.

3. (\*\*) - Parameters are not under NABL Scope.

Authorised Signatory  
Dr. Deependra Kumar Sinha  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager



Ground water Sample loaction near SLF





CIN: U74999JH2018PTC011125

**ENVIRONMENTAL LABORATORIES &**PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA,  
HATIA, RANCHI-834003 (JHARKHAND)  
Email: info@elespl.com, eles.ranchi@gmail.comGST NO:- 20AAECE9713D124  
Phone/Fax No.: 0651-2290103**ENGINEERING SERVICES PVT. LTD.**ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED  
NABL Accredited & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis

Annexure-III-A



TC-8839

**TEST REPORT OF WATER QUALITY**

<b>Test Report No.</b>	: ELES/RNC/2020/501	<b>Report Release Date</b>	: 14.09.2020
<b>LOA No.</b>	: FY 20-21	<b>Work Order Date</b>	: 20.07.2020
<b>ULR No.</b>	: TC88392000000011P	<b>Schedule</b>	: Half Yearly
<b>CUSTOMER DETAILS</b>		<b>SAMPLE DETAILS</b>	
<b>Customer Name</b>	: Tata Blue Scope Steel Limited	<b>Sample Ref. No.</b>	: ELES/RNC/2020/GW/13
<b>Address</b>	: Coated Steel Division, Bara, P.O- Agrico, Jamshedpur-831009, Dist.- East Singhbhum	<b>Sampling Date</b>	: 24.07.2020
<b>Plant Status</b>	: Operational	<b>Sample Received Date</b>	: 27.07.2020
<b>Period of Analysis</b>	: 27.07.2020 to 14.08.2020	<b>Type of Sample</b>	: Ground Water
		<b>Source of Sample/Location</b>	: (Tube Well), Around SLF
		<b>Sampling Procedure</b>	: ELES/DOC/SMPL/01
		<b>Sample Collected By</b>	: ELES Pvt.Ltd
		<b>Sample Condition</b>	: Sealed & Preserved

**TEST REPORT**

PARAMETER	Units	TEST PROTOCOL	RESULTS	LIMITS as per IS:10500:2012 (Permissible Limit)
pH (at 22.1 °C)	mg/l	APHA 23 <sup>rd</sup> Edition 2017,4500-H <sup>+</sup> -B	6.8	6.5-8.5
Colour*	Hazen	IS 3025 (Part-04): 1983	10	15
Total Dissolved Solids (TDS)	mg/l	APHA 23 <sup>rd</sup> Edition 2017, 2540 C	630	2000
Conductivity ( at 22.3 °C)	µS/Cm	APHA 23 <sup>rd</sup> Edition 2017, 2510 B	1148	-
Turbidity	NTU	APHA 23 <sup>rd</sup> Edition 2017, 2130 B	4.0	5.0
Total Alkalinity (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part-23): 1986	140	600
Total Hardness (as CaCO <sub>3</sub> )	mg/l	APHA 23 <sup>rd</sup> Edition 2017, 2340 C	246.4	600
Nitrate as NO <sub>3</sub> *	mg/l	IS 3025 (Part-34): 1988, RA 2014	9.33	45
Chloride as Cl	mg/l	IS 3025 (Part-32): 1988, RA 2014	70.9	1000
Sulphate	mg/l	IS 3025 (Part-24):1986, RA 2014	34.95	400
Total Suspended Solids (TSS)	mg/l	APHA 23 <sup>rd</sup> Edition 2017, 2540 D	31.3	-
Fluoride as F	mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500-F <sup>-</sup> -D	B.D.L(D.L:0.1)	1.5
Ammonia**	mg/l	APHA 23 <sup>rd</sup> Edition 2017, 4500 NH <sub>3</sub> ,F	0.125	0.5
Sulphide*	mg/l	IS 3025 (Part-29): 1986	B.D.L(D.L:0.05)	0.05
Phenolic Compounds*	mg/l	IS 3025 (Part-43): 1992	B.D.L(D.L:0.001)	0.002
Calcium	mg/l	APHA 23 <sup>rd</sup> Edition 2017, 3500 B	75.9	200

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

**Remarks:** 1. pH done at Lab.

2. ( \* ) - Parameters are out sourced to NABL accredited Lab at Kolkata.

3. (\*\* ) - Parameters are not under NABL Scope.

**Authorised Signatory,**  
Dr. Deependra Kumar Sinha  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager



Annexure-III

**ENVIRONMENTAL LABORATORIES &****ENGINEERING SERVICES PVT. LTD.**PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA  
HATIA, RANCHI-834003 (JHARKHAND)Email: [info@elespl.com](mailto:info@elespl.com) ; [eles.ranchi@gmail.com](mailto:eles.ranchi@gmail.com)  
GST NO:- 20AAECE9713D1Z4 Phone no : 0651-2290103

ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED

NABL Accreditation & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis**TEST REPORT OF WATER QUALITY**

Test Report No. : ELES/RNC/2020/654	Report Release Date : 17.10.2020
Service Order No. : 8210003577/CS4	Service Order Date : 31.07.2020
ULR No. : TC883920000000042P	Schedule : Half Yearly
<b>CUSTOMER DETAILS</b>	
Customer Name : Tata Blue Scope Steel Limited	Sample Ref. No. : ELES/RNC/2020/GW/45
Address : Coated Steel Division, Bara, P.O- Agrico, Jamshedpur-831009, Dist.- East Singhbhum	Sampling Date : 03.09.2020
Plant Status : Operational	Sample Received Date : 05.09.2020
Period of Analysis : 05.09.2020 to 13.10.2020	Type of Sample : Ground Water
	Source of Sample/Location : (Tube Well), Around SLF
	Sampling Procedure : ELES/DOC/SMPL/01
	Sample Collected By : ELES Pvt.Ltd
	Sample Condition : Sealed & Preserved

**TEST REPORT**

PARAMETER	Units	TEST PROTOCOL	RESULTS	LIMITS as per IS:10500:2012 (Permissible Limit)
Iron As Fe*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	0.026	1.0
Magnesium as Mg*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	8.84	30
Arsenic as As*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	0.001	0.01
Hexavalent Chromium as Cr+6*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	B.D.L(D.L:0.02)	--
Calcium as Ca	mg/l	APHA 23 <sup>rd</sup> Edition, 3500 B	75.9	200

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

Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.

Authorized Signatory  
Dr. Deependra Kumar Sinha  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager



**झारखण्ड राज्य प्रदूषण नियंत्रण पर्वद**  
**JHARKHAND STATE POLLUTION CONTROL BOARD**  
 T.A. DIVISION BUILDING (GROUND FLOOR), H.E.C., DHURWA, RANCHI-834004  
 Phone No:- 2400852, 2400979, 2400851, Fax No:- 2400850.

Ref No. JA/2855/WI/332

Date :- 1.2.07.

**No Objection Certificate under section 25 & 26 of the water (Prevention & Control of pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of pollution) Act, 1981.**

1. Reference application no. 4588 dated 19-09-05 of M/s Tata BlueScope Steel Ltd. , Bara Ash pond Area, Jamshedpur- 831009 for setting up a plant for manufacturing of Zinc- Aluminium, Coated Steel Strip and Polyester paint Coated Strip at Bara Ash pond Area, Po- Agrico, Dist. – East Singhbhum. The production capacity of the industry will be as follows :-

- 1) Zinc-Aluminium Coated Steel Strips (Galvalue/Zinc column - 100,000 TPY  
 2) Polyester Paint coated Strip- 150,000TPY

Project Cost- 785.0 Crores

2. After Consideration

- i) The facts stated in the N.O.C application & Project Report  
 ii) Provisions of related water (Prevention & control of Pollution) Act, 1974 & Air (Prevention & Control of pollution) Act, 1981.  
 iii) EIA/EMP submitted.  
 iv) Public Hearing conducted on 12-05-06.

3. N.O.C in favour of unit, based on EIA/EMP & facts stated in the project report. N.O.C application is hereby accorded subject to the following conditions:-

- i) The unit shall obtain consent to operate from State pollution Control Board under section 25 and 26 of the Water (Prevention & Control of pollution) Act, 1974 and section 21 of the Air (Prevention & Control of pollution) Act, 1981 prior to commissioning of the plant.  
 ii) The unit shall install Effluent Treatment Plant adopting appropriate technology to treat the effluent to the standard stipulated and it shall be recirculated.  
 iii) All tanks used for collection and treatment of effluent shall be made impervious by providing adequate cement concrete/stone masonry/stone slab lining with leak proof materials.  
 iv) The unit shall install water meter to measure the water consumed for different purposes as per the water (Prevention & Control of pollution) Cess Act, 1977.  
 v) The unit shall ensure continuous and uninterrupted power supply so that the pollution control system functions uninterruptedly. Separate energy meters shall be provided for the pollution control systems.  
 vi) The unit shall upgrade pollution control systems as and when new technologies are available.  
 vii) The unit shall install suitable Air pollution control devices wherever necessary to control fugitive emission, and emission from stack shall conform to the stipulated standards.  
 viii) The height of stack(s) shall be as per norms of Central Pollution Control Board. Necessary port hole(s) ladder and platform shall be provided with the stack as per norms of the Central Pollution Control Board for stack emission monitoring.

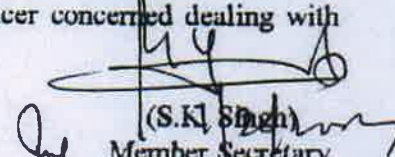
- ix) The unit shall provide Ambient Air Quality Report & Noise level monitoring report before and after commissioning of the plant. The unit shall ensure that the Noise level & AAQ are within the prescribed limit.
  - x) The D.G. sets shall be housed properly to minimize noise pollution in and around the factory campus. The height of exhaust pipe shall be raised as per the norms of C.P.C.B.
  - xi) The plantation shall be made in every direction in all vacant spaces available around the factory campus.
  - xii) The unit shall prepare and submit a plan of rain water harvesting within Six months.
  - xiii) The unit shall implement all pollution control measures as suggested in EIA/EMP.
  - xiv) Online monitoring system shall be installed to check pollution level continuously.
  - xv) For the disposal of Oily and Volatile organic waste, Incinerator shall be provided with adequate pollution control devices to meet the Board's emission standard.
  - xvi) The unit shall obtain Environmental Clearance from MOEF, Govt. of India by 30<sup>th</sup>, June, 2007.
  - xvii) The unit shall comply the following directions as per the recommendation of the committee, constituted vide Board's letter no. 3113 dated 21-09-06
    - a) The road leading from M/s Timken India Ltd. to M/s Tata BlueScope Steel Ltd. Shall be made pucca and frequency of water spraying shall be increased.
    - b) Slag dumped in the northern side of the premises shall be removed.
    - c) Garland drain along the boundary outside the premises shall be provided.
    - d) Water spraying on all haul roads shall be done regularly.
    - e) Garbage dumped in the Eastern side of the premises shall be removed.
4. The Jharkhand State Pollution Control Board reserves the right to revise and/or add any other conditions, if necessary, for the protection of Environment and to ensure pollution control or any.
  5. The present N.O.C shall not be considered as an assurance for granting consent to operate the proposed plant and is subject to compliance of all conditions as mentioned above.
  6. This N.O.C is valid for a period of 12 months from the date of issue.

Sd/-  
(S.K. Singh)  
Member Secretary

Memo No. 332

Ranchi, Dated / 2 - 07.

Copy forwarded to M/s Tata BlueScope Steel Ltd., Bara Ash pond Area, Jamshedpur-831009 /Secretary, Ministry of Environment and Forest, Govt. of India New Delhi/Secretary, Dept. of Forest and Environment, Govt. Of Jharkhand, Ranchi/ Chief inspector of Factories, Doranda, Ranchi/Deputy Commissioner, East Singhbhum/Director Industries, Govt. of Jharkhand, Ranchi/Regional Office, J.S.P.C Board, Jamshedpur/officer concerned dealing with consent/PS to Chairman.

  
(S.K. Singh)  
Member Secretary

- ix) The unit shall provide Ambient Air Quality Report & Noise level monitoring report before





## JHARKHAND STATE POLLUTION CONTROL BOARD

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI 834004  
Telephone: 0651-2400850 (Fax)/ 2400851/2400852/2401847/2400979/2400139

Ref No. JSPCB/HO/RNC/CTO-6536632/2020/346

Dated : 2020-02-07

### Consent to operate (CTO) under section 25 /26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981

1. Application (s) dated 2019-10-03 of Tata BlueScope Steel Pvt. Limited, Occupier Name :Mr Riten Choudhury for consent under section 25 (1)(b)/25 (1) (c)/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(1) of the Air (Prevention & Control of Pollution) Act,1981..
  
2. **Documents Relied Upon:**
  - (a) The content of Environmental Clearance (EC), Ref. No. J-11011/271/2007-IA. II (I) dated 24.08.20007 issued by MOEF. Govt. of India;
  - (b) The content of Consent-to-Establish (CTE) issued vide Ref. No. 332 dated 01.02.2007 for 1) Zinc Alumunium Coated Steel Strips (Galvalue / Zinc Column - 100,000 TPY 2) Polyester Paint Coated Strip - 150,000 TPY;
  - (c) The content of Consent-to-Operate (CTO), issued vide Ref. No. G-5922 dated 28.12.2015 for Metal Coated Steel Coils - 1,00,000 TPA and Painted Coils - 150000 TPA valid up to 31.12.2019 , At- Bara , PO- Agrico, Jamshedpur.
  - (d) The content of Land lease agreement effective from 12.10.2006;
  - (e) The content of self declaration that unit shall obtain raw material from valid sources;
  - (f) The content of Inspection Report (I/R), 1799 dated 17.10.2019 Regional Officer, Regional Office-Cum-Laboratory, Jamshedpur;
  - (g) The content of Hazardous waste authorization for one year vide 2021 dated 20.07.2011;
  - (h) The content of Environmental Clearance (EC), Ref. No. J-11011/271/2007-IA. II (I) dated 24.08.20007 issued by MOEF. Govt. of India;
  
3. The consent is granted under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 to operate the project in Mauza -1157 , P S -Bara , District -EAST SINGHBUM , as follows:

Project	Site-Area		Investment (Rs)	Product & Capacity	Period of CTO
	Plot Nos.	Area			
					Date of issue To

Before Expansion	Ward No.11,JNAC Khata No.:52	24 Hactares	880 Crores (as in application)	1) Zinc Alumunium Coated Steel Strips (Galvalue / Zinc Column - 100,000 TPY 2) Polyester Paint Coated Strip - 150,000 TPY	31/12/2024
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**(A) Specific Conditions:**

1. That, the occupier shall submit AAQR, SMR, Effluent and Noise monitoring report to the Board.
2. That, the occupier shall maintain and operate APCD during discharge of not pitch.
3. That, the occupier shall submit noise level monitoring report to the Board.
4. That, the occupier shall operate Pollution Control Device (APCD) i.e. Fume Extraction system & Others regularly and submit its photographs as compliance;
5. That, the occupier shall do unloading of raw material in such a covered area that fugitive emissions shall be minimum and fixed type water sprinkling system must be installed in this area;
6. That, the occupier shall make Work area and transport roads concrete/ black top within two months of issue of this consent order failing which Consent to Operate shall be revoked.
7. That, the occupier shall purchase raw material only from valid source and shall maintain record of it and shall show the record to the Inspecting Officer during inspection;
8. That, the occupier shall inform to Regional Office-Cum- Lab, Jamshedpur and Head Office, JSPC Board, at Ranchi within 24 hrs from the time of closure or opening of the plant.
9. That, the occupier shall submit point wise compliance report of condition of this Consent to operate 120 days prior to the date of expiry of this consent yearly on successive year;
10. That, the occupier shall if be found violating the Consent to Operate at any point of time during inspection of the plant by the competent authority, the Consent to Operate shall be revoked as per provision of the acts.
11. That, the occupier shall ensure the cleaning and wetting of ground regularly to improve house keeping.
12. That, the occupier shall construct 10 ft. height pucca wind breaking wall made up of stone/ brick masonry or RCC.

13. That, the occupier shall do cleaning & wetting of the ground regularly to maintain good house keeping.
14. That, the occupier shall install dust containment cum suppression system for its equipment.
15. That, the occupier shall submit applications for renewal of consent under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 again 120 days prior to the date of expiry of this consent i.e. 31.12.2024 with documents showing compliance of all of the above condition.
16. That, the occupier shall submit photographs of all the above as proof of compliance, specific to Tree Plantation, Rain water harvesting and Water sprinkling system.
17. That, the occupier shall operate & maintain effluent treatment plant and sewage treatment plant for treatment of effluent.
18. That, the occupier shall ensure that there should not be any spillage of coolant/ effluent.
19. That, the occupier shall, plant 100 Nos. of Trees of different species and maintain it for 06 years. Submit the photographs of 100 trees plantation with count Nos. and name of species planted, within Six months as compliance of this conditions and is mandatory
20. That, the occupier shall, implement Rain water harvesting system and submit the photographs of Rainwater harvesting being implemented including harvesting shown of Roof top rain water, within Six months as compliance of this conditions and is mandatory
21. That, the occupier shall upgrade operate and maintain fume extraction system to control VOC fumes and shall operate water scrubber in alkali & Chromate section.
22. That, the occupier shall comply conditions of Environmental Clearance (EC), issued vide Ref. No. J-11011/271/2007-IA. II (I) dated 24.08.2007 issued by MOEF. Govt. of India;

**(B) General Conditions :**

- (1) That, the occupier shall maintain the **National Ambient Air Quality Standard** given below:

S N	Pollutant	Time Weighted Average	Concentration in Ambient Air	
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Govt.)
(1)	(2)	(3)	(4)	(5)
1.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Annual 24 hours	50 80	20 80
2.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Annual 24 hours	40 80	30 80
3.	Particulate Matter (size less than 10 µm) or PM <sub>10</sub> , µg/m <sup>3</sup>	Annual 24 hours	60 100	60 100
4.	Particulate Matter (size less than 2.5 µm) or PM <sub>2.5</sub> , µg/m <sup>3</sup>	Annual 24 hours	40 60	40 60
5.	Ozone(O <sub>3</sub> ), µg/m <sup>3</sup>	8 hours 1 hour	100 180	100 180
6.	Lead (Pb) µg/m <sup>3</sup>	Annual 24 hours	0.50 1.0	0.50 1.0
7.	Carbon Monoxide (CO) mg/m <sup>3</sup>	8 hours 1 hour	02 04	02 04
8.	Ammonia (NH <sub>3</sub> ) µg/m <sup>3</sup>	Annual 24 hours	100 400	100 400
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) µg/m <sup>3</sup>	Annual	05	05
10.	Benzo(a) Pyrene(BaP) Particulate Phase only ng/m <sup>3</sup>	Annual	01	01
11.	Arsenic (As) ng/m <sup>3</sup>	Annual	06	06
12.	Nickel (Ni) ng/m <sup>3</sup>	Annual	20	20

**Note : Serial no. 1 to 4 – Mandatory  
Serial no. 5 to 12 As applicable for specific type of industry.**

- (2) That, the occupier shall maintain the emission quality within the standard and the quantity, as follows:

S N	Parameter	Standard
1	Particulate Matter	150 mg/ Nm <sup>3</sup>

- (3) That, the occupier shall keep process effluent in close-circuit and the quality of effluent from other sources in conformity with the standard (s) and the discharge quantity as below:

S N	Parameter	Standard
1	Total Suspended Solids	100 mg/L
2	BOD	30 mg/L
3	COD	250 mg/L
4	Oil & Grease	10 mg/L

- (4) That, the occupier shall dispose of solid wastes as follows:

S N	Waste Type	Mode of Disposal
1	Hazardous Carbonaceous Wastes	In co-processing in high temperature furnaces or kilns
2	Hazardous Non-Carbonaceous Wastes	In TSDF
3	Non-Carbonaceous Non-Hazardous solid wastes/ Mine Over Burden	As a substitute of Soil or Mineral

- (5) That, the occupier shall keep D G Set(s) within acoustic enclosure and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm.
- (6) That, the occupier shall install and maintain Central Ground Water Board/ State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge and submit the photographic view of the structures within a month.
- (7) That, the occupier shall grow and maintain greenery of the project in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.
- (8) That, the occupier shall submit environmental statement with supporting stoichiometric calculations analyses reports, every year latest by 30th September of the next financial year.
- (9) That, the occupier shall submit report(s) duly monitored and issued by an NABL accredited / ISO 9001:2008 and OHSAS 18001:2007 certified laboratory in compliance sub-para (2), (3), (4) and (5) of paragraph 3 of this CTO yearly at required periodicity.

- (10) That, this CTO is valid subjected to the validity of mining Lease/Mining Plan/Ecofriendly/Environmental Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, this consent shall be treated as revoked automatically.
  - (11) That, this CTO is issued from the environmental angle only and does not absolve the occupier from other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with these conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ occupier.
  - (12) That, this CTO shall not in any way, adversely affect or jeopardize the legal proceeding, if any, instituted in the past or that could be, instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.
  - (13) That, the occupier shall comply with all applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974; the Water (Prevention & Control of Pollution) Cess Act, 1977; the Air (Prevention & Control of Pollution) Act, 1981; and the Environment (Protection) Act, 1986 and Rules made there under.
4. **That, this CTO shall not absolve the occupier from making compliance of other statutory prescribed under any law or direction of courts or any other instrument for the time being in force.**
  5. **That, this CTO is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTO will be revoked if any of the information/documents/certificates/undertaking given by the occupier is found false/fictitious/forged in future.**
  6. **The Order shall be valid subject to compliance of all other legal requirements applicable to the unit.**
  7. **The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alteration in conditions of this consent.**

**This is issued with the approval of the Competent authority**

RAJEEV Digitally signed  
by RAJEEV  
LOCHAN LOCHAN BAKSHI  
BAKSHI Date: 2020.02.07  
17:50:17 +05'30'  
**(R.L.Bakshi)**  
Member secretary

Memo No. : JSPCB/HO/RNC/CTO-  
6536632/2020/346

Dated : 2020-02-07

**Copy to:** M/s Tata BlueScope Steel Pvt. Limited, At: Bara, PO: Agrico, Jamshedpur-831009, Dist- East Singhbhum, Jharkhand/ the Director of Industry, Government of Jharkhand, Ranchi/ the Deputy Commissioner, East Singhbhum / the Chief Inspector of Factories, Ranchi/ the Regional Office-cum-Laboratory, Jamshedpur for information & necessary action.

RAJEEV Digitally signed  
by RAJEEV  
LOCHAN LOCHAN BAKSHI  
BAKSHI Date: 2020.02.07  
17:51:00 +05'30'  
**(R.L.Bakshi)**  
Member secretary



**JHARKHAND STATE POLLUTION CONTROL BOARD**  
**REGIONAL OFFICE-CUM-LABORATORY**  
**FORM-2/See Rule 3 (C) and 5 (s)**

**FORM FOR GRANT OF AUTHORIZATION NOC OCUPIER OR OPERATOR HANDLING  
HAZARDOUS WASTES.**

Ref. No: - 2021

Dated:- 20/7/11

1. M/s **Tata Blue Scope Steel Ltd** hereby granted provisional authorization to operate a facility for collection, reception, treatment storage, transport and disposal of hazardous waste on the premises stipulated at- **Bara, P.O.- Agrico, Jamshedpur, Dist- East Singhbhum.**
2. The authorization granted to operate a facility for collection, treatment storage and disposal of hazardous wastes.
3. The authorization shall be in force for a period of **5 years** with effect from date- **24.03.2011**
4. The authorization in subject to the conditions stated below and such conditions as may be specified in the Rules for the time being force under the Environment (Protection) Act, 1986.
  - (i) The authorization shall comply with the provisions of the Environment (P) Act, 1986 and the Rules made there under.
  - (ii) The authorization or its renewal shall be produced for inspection at the request of an office authorized by the State Pollution Control Board.
  - (iii) The person authorized shall not rent, sell, transfer or otherwise transport the hazardous waste(s) without obtaining prior permission of the State Pollution Control Board.
  - (iv) Any unauthorized change in personnel, equipment as working conditions as mentioned in the application by the person authorized shall constitute a break of his authorization.
  - (v) It is the duty of authorized person to take prior permission of the State Pollution Control Board to close down the facility.
  - (vi) *An application for the renewal of an authorization shall be made as laid down in 5 (6) (II).*
  - (vii) *The quantities, categories and names of Hazardous Wastes generating processes shall be submitted within one month.*
  - (viii) *Hazardous Wastes shall be kept in secured landfill.*
  - (ix) *The unit shall maintain records of collection, Reception, Treatment, Storage & Disposal of H/W in form-3 and submit annual return in form-4 as per the rules.*

**This is being issued as per direction of competent authority contained in letter no-3117, dated- 10.07.2004.**

To,

**M/s Tata Blue Scope Steel Ltd,  
At- Bara, P.O.- Agrico, Jamshedpur,  
Dist- East Singhbhum.**

20/7/11  
Regional Officer  
Jamshedpur.





**Jharkhand State Pollution Control Board**

**FORM 1**

[See Rules 6(1)]

Application Required For Grant/Renewal Of Authorisation For Generation Or Collection Or Storage Or Transport Or Reception Or Recycling Or Reuse Or Recovery Or Pre Processing Or Co- Processing Or Utilisation Or Treatment Or Disposal Of Hazardous And Other Waste

**Part A: General(to be filled by all)**

1. (a)	Name and address of the unit and location of facility:	Tata BlueScope Steel Pvt. Limited At: Bara,PO:Agrico,Jamshedpur-831009
(b)	Name of the Occupier of the facility or operator of disposal facility with designation, Tel, Fax and e-mail:	Mr Riten Choudhury/Managing Director//admin.csp@tatabluescopesteel.com
(c)	Authorisation required for(Please tick mark appropriate activity or activities:)	Generation,Collection,Storage,Transportation, Treatment,Disposal,Incineration
(d)	In case of renewal of authorization previous authorization numbers and dates and provide copies of annual returns of last three including the compliance reports with respect to the conditions of Prior Environmental Clearance, wherever applicable:)	Attached
2	Nature and quantity of Hazardous waste handled in T/Annum (or) KL/Annum	

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Name of Process	Name of Hazardous Waste (Category No)	Quantity	Waste Type	Waste Storage	Waste Disposal	Source of generation of waste	Physical status	Quantity stored at any time	Quantity accumulated as on 31st March
Secondary production and/or industrial use of zinc	Zinc fines/dust/ash/skimmings (dispersible form)	84.10 T/Annunum	Recyclable	Concrete Floor	Recovery and Reuse-Authorized recyclers	Metal Coating Line	Solid	20.48	90.17 T
production and/or industrial use of solvents	Spent solvents	22.60 KL/Annunum	Recyclable	MS Drums	Recovery and Reuse-Authorized recyclers	Coil Paint Line	Liquid	4.2	8.30 KL
Industrial operations using mineral/synthetic oil as lubricant in hydraulic systems or other applications	Used/spent oil	2.20 KL/Annunum	Recyclable	MS Drums	Recovery and Reuse-Authorized recyclers	Coated Steel Plant	Liquid	0.826	0.0 KL
Purification and treatment of exhaust air, water & waste water from the ..... treatment plants (CETP's)	Chemical sludge from waste water treatment	75.84 T/Annunum	Landfillable	Poly Bag	Common Landfill-to AIWPL	Waste Water Treatment Plant	Semi solid	17.40	23.42 T
Class B	Chromium (III) compounds	.840 T/Annunum	Landfillable	Poly Bag	Onsite SLF	Waste Water Treatment Plant	Semi solid	0.0	0.0 T
other	other	14.680 KL/Annunum	Incinerable	Plastic Drums	Incineration-Captive	Metal Coating Line	Liquid	3.76	0.64 KL
Disposal of barrels / containers used for handling of hazardous wastes / chemicals	Discarded containers / barrels / liners contaminated with hazardous wastes/chemicals	262.560 T/Annunum	Recyclable	Concrete Floor	Recovery and Reuse-Authorized recyclers	Coil Paint Line	Solid	60.28	26.00 T

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Disposal of barrels / containers used for handling of hazardous wastes / chemicals	Discarded containers / barrels / liners contaminated with hazardous wastes/c hemicals	15.525 T/Annunum	Recyclable	Concrete Floor	Recovery and Reuse-Authorized recyclers	Coated Steel Plant	Solid	2.967	0.0 T
Disposal of barrels / containers used for handling of hazardous wastes / chemicals	Discarded containers / barrels / liners contaminated with hazardous wastes/c hemicals	4.10 T/Annunum	Recyclable	Concrete Floor	Recovery and Reuse-Authorized recyclers	Coated Steel Plant	Solid	0.265	0.0 T
Production and/or industrial use of paints, pigments, lacquers, varnishes, plastics and inks	Process wastes, residues & sludges	8.000 KL/Annunum	Incinerable	MS Drums	Incineration-Captive	Coil Paint Line	Semi solid	15.00	8.00 KL
Disposal of barrels / containers used for handling of hazardous wastes / chemicals	Discarded containers / barrels / liners contaminated with hazardous wastes/c hemicals	19.963 T/Annunum	Incinerable	MS Drums	Incineration-Captive	Coated Steel Plant	Semi solid	5.8	5.66 T
Disposal of barrels / containers used for handling of hazardous wastes / chemicals	Discarded containers / barrels / liners contaminated with hazardous wastes/c hemicals	3.18 T/Annunum	Incinerable	Poly Bag	Incineration-Captive	Coated Steel Plant	Oily	.90	.278 T
3 a)	Year of commissioning and commencement of Production?				2011				

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*[Handwritten Signature]*

b)	Whether the industry works 1 shift/2 shifts/round the clock?	Round the clock
4	Provide copy of the Emergency Response Plan (ERP) which should address procedures for dealing with emergency situations (viz. Spillage or release or fire) as specified in the guidelines of Central Pollution Control Board. Such ERP shall comprise the following, but not limited to: <ul style="list-style-type: none"> <li>• Containing and controlling incidents so as to minimise the effects and to limit danger to the persons, environment and property;</li> <li>• Implementing the measures necessary to protect persons and the environment;</li> <li>• Description of the actions which should be taken to control the conditions at events and to limit their consequences, including a description of the safety equipment and resources available;</li> <li>• Arrangements for training staff in the duties which they are expected to perform;</li> <li>• Arrangements for informing concerned authorities and emergency services; and</li> <li>• Arrangements for providing assistance with off-site mitigatory action.</li> </ul> (To be attached separately)	Attached
5	Provide undertaking or declaration to comply with all provisions including the scope of submitting bank guarantee in the event of spillage, leakage or fire while handling the hazardous and other waste (To be attached separately)	Not Attached

**Part B: To be filled by hazardous waste generators**

a	Products and by-products manufactured (names and product wise quantity per annum):	i. Metal Coated Coils:100000 TPA ii. Painted Coils:150000 TPA iii. Zinc & Aluminum Dross: 850 TPA
b	Process description including process flow sheet indicating Inputs and Outputs (raw materials, chemicals, products, by-products,wastes, emissions, wastewater etc.) Please attach separate sheets: )	Attached
c)	<b>Characterstics(waste-wise) and Quantic of waste generation per annum:</b>	

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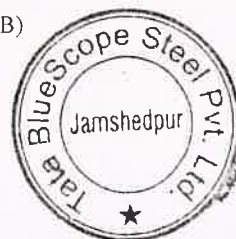
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Schedule	Name of Process	Name of Hazardous Waste (Category No)	Quantity	Characteristics of each waste	The details of utilization within the plants such as Reuse/ Recycling/ Recovery/ Reprocessing etc	If not utilised within the plant, provide details of what is done with this waste	Details of arrangements for transportation to actual users/ TSDF	Details of the environmental safeguards and environmental facilities provided for safe handling
Schedule I	Secondary production and/or industrial use of zinc	Zinc fines/dust/ash/skimings (dispersible form)	84.10 T/Annunum	Solid	No	Sale to authorized customer	Follow HWM Rule 2016	We are keeping on the concrete floor and designated storage area
Schedule I	production and/or industrial use of solvents	Spent solvents	22.60 KL/Annunum	Liquid-Flammable	No	Sale to authorized customer	Follow HWM Rule 2016	We are keeping in drums and in 2ndry containment under shed
Schedule I	Industrial operations using mineral/synthetic oil as lubricant in hydraulic systems or other applications	Used/spent oil	2.20 KL/Annunum	Liquid-Hazardous chemical	No	Sale to authorized customer	Follow HWM Rule 2016	We are keeping in drums and in 2ndry containment under shed
Schedule I	Purification and treatment of exhaust air, water & waste water from the ..... treatment plants (CETP's)	Chemical sludge from waste water treatment	75.84 T/Annunum	Semi Solid-Hazardous	No	Sale to authorized customer	Follow HWM Rule 2016	We are keeping on the concrete floor and poly bag under shed.
Schedule II	Class B	Chromium (III) compounds	.840 T/Annunum	Semi Solid-Hazardous	SLF or Sale to authorized customer	Sale to authorized customer	Follow HWM Rule 2016	We are keeping on the concrete floor and poly bag under shed.

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Schedule II	Class B	Chromium (III) compounds	.840 T/Annunum	Semi Solid-Hazardous	SLF or Sale to authorized customer	Sale to authorized customer	Follow HWM Rule 2016	We are keeping on the concrete floor and poly bag under shed.
Schedule II	other	other	14.680 KL/Annunum	Liquid-Hazardous Chemical	No	Sale to authorized customer	Follow HWM Rule 2016	We are keeping in toat and in 2ndry containment under shed
Schedule I	Disposal of barrels / containers used for handling of hazardous wastes / chemicals	Discarded containers / barrels / liners contaminated with hazardous wastes/chemicals	262.560 T/Annunum	Solid	No	Sale to authorized customer	Follow HWM Rule 2016	We are keeping on the concrete floor and designated storage area
Schedule I	Disposal of barrels / containers used for handling of hazardous wastes / chemicals	Discarded containers / barrels / liners contaminated with hazardous wastes/chemicals	15.525 T/Annunum	Solid	No	Sale to authorized customer	Follow HWM Rule 2016	We are keeping on the concrete floor and designated storage area
Schedule I	Disposal of barrels / containers used for handling of hazardous wastes / chemicals	Discarded containers / barrels / liners contaminated with hazardous wastes/chemicals	4.10 T/Annunum	Solid	No	Sale to authorized customer	Follow HWM Rule 2016	We are keeping on the concrete floor and designated storage area

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Schedule I	Production and/or industrial use of paints, pigments, lacquers, varnishes, plastics and inks	Process wastes, residues & sludges	8.000 KL/Annunum	Solid/Liquid-flammable	No	Sale to authorized customer	Follow HWM Rule 2016	We are keeping in drums and in 2ndry containment under shed
Schedule I	Disposal of barrels / containers used for handling of hazardous wastes / chemicals	Discarded containers / barrels / liners contaminated with hazardous wastes/chemicals	19.963 T/Annunum	Semi Solid-Flammable	No	Sale to authorized customer	Follow HWM Rule 2016	We are keeping in drums and in 2ndry containment under shed
Schedule I	Disposal of barrels / containers used for handling of hazardous wastes / chemicals	Discarded containers / barrels / liners contaminated with hazardous wastes/chemicals	3.18 T/Annunum	Oil-Flammable	No	Sale to authorized customer	Follow HWM Rule 2016	We are keeping on the concrete floor and poly bag under shed.

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*[Handwritten Signature]*



viii)	Environmental management plan including monitoring	As per environment management plan we are maintaining, waste water treatment plant, rain water harvesting, Secured land fill and green belt area. Monitoring: A copy is attached.
ix)	Arrangement for transportation of waste from generators	Hazardous waste is sailing to authorize vendor of pollution control board. A copy is attached.
2)	Provide details of Any other activities undertaken at the Treatment, storage and disposal facility site.	Not Attached
3)	Attach a Copy of prior Environmental Clearance	Attached

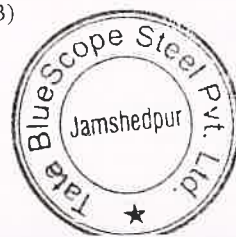
**Part D: To be filled by recyclers or pre-processors or co-processors or users of hazardous or other wastes**

1.	Nature and quantity of different wastes received per annum from domestic sources or imported or both:		
	Hazardous Wastes Type	Quantity	Source (Domestic/Imported)
2.	Installed capacity as per registration issued by the District Industries Centre or any other authorised Government agency. Provide copy:	Not Attached	
3.	Provide details of secured storage of wastes including the storage capacity	Not Attached	
4.	Process description including process flow sheet indicating equipment details, inputs and outputs (input wastes, chemicals, products, by-products, waste generated, emissions, waste water, etc.) Attach separate sheets:	Not Attached	
5.	Provide details of end users of products or by-products	Not Attached	
6.	Provide details of pollution control systems such as Effluent Treatment Plant, scrubbers, etc. including mode of disposal of waste	Not Attached	
7.	Provide details of occupational health and safety measures		
8.	Has the facility been set up as per Central Pollution Control Board guidelines? If yes, provide a report on the compliance with the guidelines:	Not Attached	
9.	Arrangements for transportation of waste to the facility		

Place: JSC  
Date: 17/02/2020

Signature of the Applicant  
Name and Designation

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*Shree*





# ENVIRONMENTAL LABORATORIES & *Annexure-Y* ENGINEERING SERVICES PVT. LTD.

PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA,  
HATIA, RANCHI-834003 (JHARKHAND)  
Email: info@elespl.com, eles.ranchi@gmail.com

ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED  
NABL Accredited & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis



CIN: U74999JH2018PTC011125

GST NO:- 20AAECE9713D1Z4  
Phone/Fax No.: 0651-2290103

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/419	Report Release Date	: 07.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC883920000000001P		

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AA/09A
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist. - East Singhbhum.	Location	: Near Nitrogen Plant
Plant Status	: Operational	Sampling Date	: 23.07.2020 to 24.07.2020
Period of Analysis	: 27.07.2020 to 14.08.2020	Sample Received Date	: 27.07.2020
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 31	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 78	4	Weather Condition	: Cloudy
5	Longitude	: 86°14'20.10"E	6	Latitude	: 22°48'52.27"N
7	NABL Group	: Atmospheric Pollution	8	Discipline	: Chemical

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS						AVG.	LIMIT
			Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6		
Particulate Matter (PM10)	µg/m³	IS 5182 (Part-23): 2006; RA2017	38	41	27				35	100 (24hrs)
Fine Particulate Matter (PM2.5)	µg/m³	USEPA CRF40	21						21	60 (24hrs)
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m³	IS 5182 (Part-2): 2001; RA2017	Shift-1 16.4	Shift-2 12.2	Shift-3 17.2	Shift-4 10.2	Shift-5 9.8	Shift-6 12.7	13.1	80 (24hrs)
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m³	IS 5182 (Part-6): 2001; RA2017	Shift-1 27.8	Shift-2 21.6	Shift-3 25.4	Shift-4 22.8	Shift-5 23.6	Shift-6 27.4	24.8	80 (24hrs)
Ammonia (NH <sub>3</sub> )	µg/m³	401; Methods of Air Sampling & Analysis	Shift-1 <10.0	Shift-2 <10.0	Shift-3 <10.0	Shift-4 <10.0	Shift-5 <10.0	Shift-6 <10.0	<10.0	400 (24hrs)
Lead * (as Pb)	µg/m³	IS 5182 (Part-22): 2004; RA2014	0.01						0.01	1 (24hrs)
Nickel * (as Ni)	ng/m³	SO-IN-MUL-TE- 075	2.4						2.4	20 (Annual)
Arsenic * (as As)	ng/m³	SO-IN-MUL-TE- 075	<2.0						<2.0	6 (Annual)

*K. Singh*



# ENVIRONMENTAL LABORATORIES & Annexure-V

PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA,  
HATIA, RANCHI-834003 (JHARKHAND)  
Email: [Info@elespl.com](mailto:Info@elespl.com), [eles.ranchi@gmail.com](mailto:eles.ranchi@gmail.com)

**ENGINEERING SERVICES PVT. LTD.**

ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED

NABL Accredited & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis



CIN: U74999JH2018PTC011125

GST NO:- 20AAECE9713D1Z4

Phone/Fax No.: 0651-2290103

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/419	Report Release Date	: 07.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC883920000000001P		

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS								AVG.	LIMIT
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	<2.0								<2.0	5 (Annual)
Benzo-(a)-Pyrene *	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	0.21								0.21	1 (Annual)
Carbon Monoxide * (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	1.60								1.60	2 (8hrs)
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Shift -1	Shift -2	Shift -3	Shift -4	Shift -5	Shift -6	Shift -7	Shift -8	<10.0	100 (8hrs)
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -9	Shift -10	Shift -11	Shift -12	Shift -13	Shift -14	Shift -15	Shift -16	<10.0	
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -17	Shift -18	Shift -19	Shift -20	Shift -21	Shift -22	Shift -23	Shift -24	<10.0	
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0					

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

Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.

Authorised Signatory

**Dr. Deependra Kumar Sinha**  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager



# ENVIRONMENTAL LABORATORIES & **Annexure-V**

PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA,  
HATIA, RANCHI-834003 (JHARKHAND)  
Email: info@elespl.com, eles.ranchi@gmail.com

**ENGINEERING SERVICES PVT. LTD.**

ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED

NABL Accredited & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis



TC-8839

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/420	Report Release Date	: 07.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC88392000000002P		

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AA/09B
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Location	: Near LPG Plant
		Sampling Date	: 23.07.2020 to 24.07.2020
Plant Status	: Operational	Sample Received Date	: 27.07.2020
Period of Analysis	: 27.07.2020 to 14.08.2020	Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 31	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 78	4	Weather Condition	: Cloudy
5	Longitude	: 86°14'03.80"E	6	Latitude	: 22°48'49.67"N
7	NABL Group	: Atmospheric Pollution	8	Discipline	: Chemical

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS						AVG.	LIMIT
			Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6		
Particulate Matter (PM10)	µg/m³	IS 5182 (Part-23): 2006; RA2017	Shift-1	Shift-2	Shift-3				38	100 (24hrs)
			44	33	37					
Fine Particulate Matter (PM2.5)	µg/m³	USEPA CRF40	24						24	60 (24hrs)
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m³	IS 5182 (Part-2): 2001; RA2017	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	14.4	80 (24hrs)
			11.6	16.2	12.4	16.6	14.7	15.1		
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m³	IS 5182 (Part-6): 2001; RA2017	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	33.3	80 (24hrs)
			32.8	39.4	26.6	23.7	35.5	41.6		
Ammonia (NH <sub>3</sub> )	µg/m³	401; Methods of Air Sampling & Analysis	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	21.3	400 (24hrs)
			23.6	27.4	18.5	20.7	21.6	15.8		
Lead * (as Pb)	µg/m³	IS 5182 (Part-22): 2004; RA2014	0.02						0.02	1 (24hrs)
Nickel * (as Ni)	ng/m³	SO-IN-MUL-TE- 075	4.5						4.5	20 (Annual)
Arsenic * (as As)	ng/m³	SO-IN-MUL-TE- 075	<2.0						<2.0	6 (Annual)

*(Handwritten Signature)*



# ENVIRONMENTAL LABORATORIES & **Annexure-V** ENGINEERING SERVICES PVT. LTD.

PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA,  
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CIN: U74999JH2018PTC011125

GST NO:- 20AAECE9713D1Z4  
Phone/Fax No.: 0651-2290103

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2020/420	Report Release Date : 07.09.2020
LOA No. : FY 20-21	Work Order Date : 20.07.2020
ULR No : TC883920000000002P	

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS								AVG.	LIMIT
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	<2.0								<2.0	5 (Annual)
Benzo-(a)-Pyrene *	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	<0.20								<0.20	1 (Annual)
Carbon Monoxide * (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	1.70								1.70	2 (8hrs)
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Shift -1	Shift -2	Shift -3	Shift -4	Shift -5	Shift -6	Shift -7	Shift -8	<10.0	100 (8hrs)
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -9	Shift -10	Shift -11	Shift -12	Shift -13	Shift -14	Shift -15	Shift -16	<10.0	
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -17	Shift -18	Shift -19	Shift -20	Shift -21	Shift -22	Shift -23	Shift -24	<10.0	
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0					

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

Remarks: 1. ( \* ) - Parameters are out sourced to NABL accredited Lab at Kolkata.

Authorised Signatory

**Dr. Deependra Kumar Sinha**  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager



# ENVIRONMENTAL LABORATORIES & *Annexure-V* ENGINEERING SERVICES PVT. LTD.

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CIN: U74999JH2018PTC011125

GST NO:- 20AAECE9713D1Z4  
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## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/421	Report Release Date	: 07.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC883920000000003P		

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AA/09C
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Location	: SR&PL West Side Boundary
		Sampling Date	: 23.07.2020 to 24.07.2020
Plant Status	: Operational	Sample Received Date	: 27.07.2020
		Type of Sample	: Ambient Air
Period of Analysis	: 27.07.2020 to 14.08.2020	Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 31	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 78	4	Weather Condition	: Cloudy
5	Longitude	: 86°14'04.71"E	6	Latitude	: 22°49'00.82"N
7	NABL Group	: Atmospheric Pollution	8	Discipline	: Chemical

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS						AVG.	LIMIT
			Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6		
Particulate Matter (PM10)	µg/m <sup>3</sup>	IS 5182 (Part-23): 2006; RA2017	Shift-1	Shift-2	Shift-3				39	100 (24hrs)
			44	34	38					
Fine Particulate Matter (PM2.5)	µg/m <sup>3</sup>	USEPA CRF40	27						27	60 (24hrs)
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-2): 2001; RA2017	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	14.1	80 (24hrs)
			16.7	18.8	14.5	11.3	10.8	12.7		
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-6): 2001; RA2017	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	27.6	80 (24hrs)
			26.8	29.6	35.7	29.4	21.6	22.2		
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	401; Methods of Air Sampling & Analysis	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	27.3	400 (24hrs)
			28.5	26.7	28.4	30.2	24.4	25.6		
Lead * (as Pb)	µg/m <sup>3</sup>	IS 5182 (Part-22): 2004; RA2014	<0.01						<0.01	1 (24hrs)
Nickel * (as Ni)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	2.7						2.7	20 (Annual)
Arsenic * (as As)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	<2.0						<2.0	6 (Annual)



# ENVIRONMENTAL LABORATORIES & Annexure-2 ENGINEERING SERVICES PVT. LTD.

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CIN: U74999JH2018PTC011125

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/421	Report Release Date	: 07.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC883920000000003P		

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS								AVG.	LIMIT
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	<2.0								<2.0	5 (Annual)
Benzo-(a)-Pyrene *	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	<0.2								<0.2	1 (Annual)
Carbon Monoxide * (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	1.7								1.7	2 (8hrs)
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Shift -1	Shift -2	Shift -3	Shift -4	Shift -5	Shift -6	Shift -7	Shift -8	<10.0	100 (8hrs)
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -9	Shift -10	Shift -11	Shift -12	Shift -13	Shift -14	Shift -15	Shift -16	<10.0	
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -17	Shift -18	Shift -19	Shift -20	Shift -21	Shift -22	Shift -23	Shift -24	<10.0	
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0					

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

Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.

*Authorised Signatory*  
**Dr. Deependra Kumar Sinha**  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager



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GST NO:- 20AAECE9713D1Z4

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CIN: U74999JH2018PTC011125

### TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/422	Report Release Date	: 07.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC883920000000004P		

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AA/09D
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Location	: Near Main Gate
Plant Status	: Operational	Sampling Date	: 23.07.2020 to 24.07.2020
Period of Analysis	: 27.07.2020 to 14.08.2020	Sample Received Date	: 27.07.2020
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 31	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 78	4	Weather Condition	: Cloudy
5	Longitude	: 86°14'13.44"E	6	Latitude	: 22°48'53.88"N
7	NABL Group	: Atmospheric Pollution	8	Discipline	: Chemical

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS						AVG.	LIMIT
			Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6		
Particulate Matter (PM10)	µg/m³	IS 5182 (Part-23): 2006; RA2017	Shift-1	Shift-2	Shift-3				31	100 (24hrs)
			30	36	28					
Fine Particulate Matter (PM2.5)	µg/m³	USEPA CRF40	23						23	60 (24hrs)
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m³	IS 5182 (Part-2): 2001; RA2017	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	11.8	80 (24hrs)
			15.5	12.5	13.8	9.4	8.1	11.7		
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m³	IS 5182 (Part-6): 2001; RA2017	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	26.9	80 (24hrs)
			30.2	34.3	25.6	21.7	28.2	21.5		
Ammonia (NH <sub>3</sub> )	µg/m³	401; Methods of Air Sampling & Analysis	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	14.5	400 (24hrs)
			17.6	10.4	14.2	16.7	15.5	12.8		
Lead * (as Pb)	µg/m³	IS 5182 (Part-22): 2004; RA2014	0.02						0.02	1 (24hrs)
Nickel * (as Ni)	ng/m³	SO-IN-MUL-TE-075	6.7						6.7	20 (Annual)
Arsenic * (as As)	ng/m³	SO-IN-MUL-TE-075	<2.0						<2.0	6 (Annual)

*(Handwritten Signature)*



# ENVIRONMENTAL LABORATORIES & Annexure-V

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CIN: U74999JH2018PTC011125

### TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/422	Report Release Date	: 07.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC883920000000004P		

#### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS								AVG.	LIMIT
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	<2.0								<2.0	5 (Annual)
Benzo-(a)-Pyrene *	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	0.25								0.25	1 (Annual)
Carbon Monoxide * (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	1.60								1.60	2 (8hrs)
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Shift -1	Shift -2	Shift -3	Shift -4	Shift -5	Shift -6	Shift -7	Shift -8	<10.0	100 (8hrs)
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -9	Shift -10	Shift -11	Shift -12	Shift -13	Shift -14	Shift -15	Shift -16	<10.0	
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -17	Shift -18	Shift -19	Shift -20	Shift -21	Shift -22	Shift -23	Shift -24	<10.0	
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		

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

Remarks: 1. ( \* ) - Parameters are out sourced to NABL accredited Lab at Kolkata.

Authorized Signatory  
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### TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/548	Report Release Date	: 21.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC883920000000015P	Schedule	: Monthly (August'2020)

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AA/32
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist. - East Singhbhum.	Location	: Near Nitrogen Plant
Plant Status	: Operational	Sampling Date	: 19.08.2020 to 20.08.2020
Period of Analysis	: 24.08.2020 to 12.09.2020	Sample Received Date	: 24.08.2020
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION			
1	Average Temperature (°C)	: 31	2 Barometric Pressure (mmHg) : 750
3	Relative Humidity (%)	: 80	4 Weather Condition : Cloudy
5	Longitude	: 86°14'20.10"E	6 Latitude : 22°48'52.27"N
7	NABL Group	: Atmospheric Pollution	8 Discipline : Chemical

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS						AVG.	LIMIT
			Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6		
Particulate Matter (PM10)	µg/m <sup>3</sup>	IS 5182 (Part-23): 2006; RA2017	67	56	64				62	100 (24hrs)
Fine Particulate Matter (PM2.5)	µg/m <sup>3</sup>	USEPA CRF40	18						18	60 (24hrs)
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-2): 2001; RA2017	5.5	<5.0	5.1	<5.0	<5.0	6.2	<5.0	80 (24hrs)
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-6): 2001; RA2017	32.4	24.6	34.1	27.2	20.4	25.1	27.3	80 (24hrs)
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	401; Methods of Air Sampling & Analysis	22.3	28.4	19.4	13.7	17.4	23.1	20.7	400 (24hrs)
Lead * (as Pb)	µg/m <sup>3</sup>	IS 5182 (Part-22): 2004; RA2014	0.01						0.01	1 (24hrs)
Nickel * (as Ni)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	2.2						2.2	20 (Annual)
Arsenic * (as As)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	<2.0						<2.0	6 (Annual)



# ENVIRONMENTAL LABORATORIES & Annexure-DA

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TC-8839

CIN: U74999JH2018PTC011125

### TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/548	Report Release Date	: 21.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC883920000000015P	Schedule	: Monthly (August'2020)

#### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS								AVG.	LIMIT
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	<2.0								<2.0	5 (Annual)
Benzo-(a)-Pyrene *	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	<0.20								<0.20	1 (Annual)
Carbon Monoxide * (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	1.5								1.5	2 (8hrs)
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Shift -1	Shift -2	Shift -3	Shift -4	Shift -5	Shift -6	Shift -7	Shift -8	<10.0	100 (8hrs)
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -9	Shift -10	Shift -11	Shift -12	Shift -13	Shift -14	Shift -15	Shift -16	<10.0	
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -17	Shift -18	Shift -19	Shift -20	Shift -21	Shift -22	Shift -23	Shift -24	<10.0	
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0				

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

Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.

*Dr. Deependra Kumar Sinha*  
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TC-8839

### TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/549	Report Release Date	: 21.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC883920000000016P	Schedule	: Monthly (August'2020)

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AA/33
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Location	: Near LPG Plant
		Sampling Date	: 19.08.2020 to 20.08.2020
Plant Status	: Operational	Sample Received Date	: 24.08.2020
		Type of Sample	: Ambient Air
Period of Analysis	: 24.08.2020 to 12.09.2020	Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION			
1	Average Temperature (°C)	: 31	2 Barometric Pressure (mmHg) : 750
3	Relative Humidity (%)	: 80	4 Weather Condition : Cloudy
5	Longitude	: 86°14'03.80"E	6 Latitude : 22°48'49.67"N
7	NABL Group	: Atmospheric Pollution	8 Discipline : Chemical

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS						AVG.	LIMIT
			Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6		
Particulate Matter (PM10)	µg/m <sup>3</sup>	IS 5182 (Part-23): 2006; RA2017	Shift-1	Shift-2	Shift-3				72	100 (24hrs)
			79	67	70					
Fine Particulate Matter (PM2.5)	µg/m <sup>3</sup>	USEPA CRF40	34						34	60 (24hrs)
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-2): 2001; RA2017	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	5.1	80 (24hrs)
			6.5	7.1	<5.0	5.4	5.7	6.1		
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-6): 2001; RA2017	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	23.7	80 (24hrs)
			24.5	30.5	26.1	16.4	19.5	25.1		
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	401; Methods of Air Sampling & Analysis	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	19.8	400 (24hrs)
			20.8	27.7	18.5	15.1	14.2	22.2		
Lead * (as Pb)	µg/m <sup>3</sup>	IS 5182 (Part-22): 2004; RA2014	0.01						0.01	1 (24hrs)
Nickel * (as Ni)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	3.3						3.3	20 (Annual)
Arsenic * (as As)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	<2.0						<2.0	6 (Annual)



CIN: U74999JH2018PTC011125

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TC-8839

### TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2020/549	Report Release Date : 21.09.2020
LOA No. : FY 20-21	Work Order Date : 20.07.2020
ULR No : TC883920000000016P	Schedule : Monthly (August'2020)

#### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS								AVG.	LIMIT
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	<2.0								<2.0	5 (Annual)
Benzo-(a)-Pyrene *	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	<0.20								<0.20	1 (Annual)
Carbon Monoxide * (O)	mg/m <sup>3</sup>	EPA 600/P-99/001F	1.7								1.7	2 (8hrs)
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Shift -1	Shift -2	Shift -3	Shift -4	Shift -5	Shift -6	Shift -7	Shift -8	<10.0	100 (8hrs)
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -9	Shift -10	Shift -11	Shift -12	Shift -13	Shift -14	Shift -15	Shift -16	<10.0	
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -17	Shift -18	Shift -19	Shift -20	Shift -21	Shift -22	Shift -23	Shift -24	<10.0	
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0					

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

Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.

*Dr. Deependra Kumar Sinha*  
**Dr. Deependra Kumar Sinha**  
 Ph. D. Environmental Engg.  
 ELES Pvt. Ltd. Technical Manager



CIN: U74999JH2018PTC011125

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## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/550	Report Release Date	: 21.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC88392000000017P	Schedule	: Monthly (August'2020)

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AA/34
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Location	: SR&PL West Side Boundary
Plant Status	: Operational	Sampling Date	: 19.08.2020 to 20.08.2020
Period of Analysis	: 24.08.2020 to 12.09.2020	Sample Received Date	: 24.08.2020
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION				
1	Average Temperature (°C)	: 31	2 Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 80	4 Weather Condition	: Cloudy
5	Longitude	: 86°14'04.71"E	6 Latitude	: 22°49'00.82"N
7	NABL Group	: Atmospheric Pollution	8 Discipline	: Chemical

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS						AVG.	LIMIT
			Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6		
Particulate Matter (PM10)	µg/m <sup>3</sup>	IS 5182 (Part-23): 2006; RA2017	75	61	65				67	100 (24hrs)
Fine Particulate Matter (PM2.5)	µg/m <sup>3</sup>	USEPA CRF40	22						22	60 (24hrs)
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-2): 2001; RA2017	6.7	10.4	7.5	<5.0	5.1	8.4	6.4	80 (24hrs)
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-6): 2001; RA2017	31.3	36.2	22.3	17.7	19.3	25.6	25.4	80 (24hrs)
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	401; Methods of Air Sampling & Analysis	18.5	28.5	23.6	15.5	22.8	21.5	21.7	400 (24hrs)
Lead * (as Pb)	µg/m <sup>3</sup>	IS 5182 (Part-22): 2004; RA2014	<0.01						<0.01	1 (24hrs)
Nickel * (as Ni)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	<2.0						<2.0	20 (Annual)
Arsenic * (as As)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	<2.0						<2.0	6 (Annual)



CIN: U74999JH2018PTC011125

# ENVIRONMENTAL LABORATORIES & *Annexure-VA*

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### TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2020/550	Report Release Date : 21.09.2020
LOA No. : FY 20-21	Work Order Date : 20.07.2020
ULR No : TC883920000000017P	Schedule : Monthly (August'2020)

#### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS								AVG.	LIMIT
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	3.02								3.02	5 (Annual)
Benzo-(a)-Pyrene *	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	<0.20								<0.20	1 (Annual)
Carbon Monoxide * )	mg/m <sup>3</sup>	EPA 600/P-99/001F	1.5								1.5	2 (8hrs)
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Shift -1	Shift -2	Shift -3	Shift -4	Shift -5	Shift -6	Shift -7	Shift -8	<10.0	100 (8hrs)
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -9	Shift -10	Shift -11	Shift -12	Shift -13	Shift -14	Shift -15	Shift -16	<10.0	
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -17	Shift -18	Shift -19	Shift -20	Shift -21	Shift -22	Shift -23	Shift -24	<10.0	
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0					

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

Remarks: 1. ( \* ) - Parameters are out sourced to NABL accredited Lab at Kolkata.

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CIN: U74999JH2018PTC011125

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TC-8839

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/551	Report Release Date	: 21.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC88392000000018P	Schedule	: Monthly (August'2020)

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AA/35
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Location	: Near Main Gate
Plant Status	: Operational	Sampling Date	: 19.08.2020 to 20.08.2020
Period of Analysis	: 24.08.2020 to 12.09.2020	Sample Received Date	: 24.08.2020
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION				
1	Average Temperature (°C)	: 31	2 Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 80	4 Weather Condition	: Cloudy
5	Longitude	: 86°14'13.44"E	6 Latitude	: 22°48'53.88"N
7	NABL Group	: Atmospheric Pollution	8 Discipline	: Chemical

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS						AVG.	LIMIT
			Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6		
Particulate Matter (PM10)	µg/m³	IS 5182 (Part-23): 2006; RA2017	Shift-1	Shift-2	Shift-3				70	100 (24hrs)
			77	59	73					
Fine Particulate Matter (PM2.5)	µg/m³	USEPA CRF40	16						16	60 (24hrs)
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m³	IS 5182 (Part-2): 2001; RA2017	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	7.6	80 (24hrs)
			9.1	7.3	11.4	6.1	5.4	6.5		
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m³	IS 5182 (Part-6): 2001; RA2017	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	22.6	80 (24hrs)
			24.6	18.1	21.5	19.5	23.4	28.7		
Ammonia (NH <sub>3</sub> )	µg/m³	401; Methods of Air Sampling & Analysis	Shift-1	Shift-2	Shift-3	Shift-4	Shift-5	Shift-6	17.0	400 (24hrs)
			25.5	22.4	18.3	<10.0	15.4	20.6		
Lead * (as Pb)	µg/m³	IS 5182 (Part-22): 2004; RA2014	0.01						0.01	1 (24hrs)
Nickel * (as Ni)	ng/m³	SO-IN-MUL-TE- 075	2.5						2.5	20 (Annual)
Arsenic * (as As)	ng/m³	SO-IN-MUL-TE- 075	<2.0						<2.0	6 (Annual)



CIN: U74999JH2018PTC011125

# ENVIRONMENTAL LABORATORIES & Annexure-VA

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### TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2020/551	Report Release Date : 21.09.2020
LOA No. : FY 20-21	Work Order Date : 20.07.2020
ULR No : TC883920000000018P	Schedule : Monthly (August'2020)

#### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS								AVG.	LIMIT
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	<2.0								<2.0	5 (Annual)
Benzo-(a)-Pyrene *	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	<0.20								<0.20	1 (Annual)
Carbon Monoxide * (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	1.5								1.5	2 (8hrs)
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Shift -1	Shift -2	Shift -3	Shift -4	Shift -5	Shift -6	Shift -7	Shift -8	<10.0	100 (8hrs)
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -9	Shift -10	Shift -11	Shift -12	Shift -13	Shift -14	Shift -15	Shift -16	<10.0	
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Shift -17	Shift -18	Shift -19	Shift -20	Shift -21	Shift -22	Shift -23	Shift -24	<10.0	
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0					

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

Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.

  
**Dr. Deependra Kumar Sinha**  
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Annexure-VB



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## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2020/648	Report Release Date : 17.10.2020
Service Order No. : 8210003577/CS4	Service Order Date : 31.07.2020
ULR No : TC883920000000038P	Schedule : Monthly( September)

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AA/53
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Location	: Near Nitrogen Plant
Plant Status	: Operational	Sampling Date	: 14.09.2020 to 15.09.2020
Period of Analysis	: 16.09.2020 to 14.10.2020	Sample Received Date	: 16.09.2020
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 34	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 63	4	Weather Condition	: Clear
5	Longitude	: 86°14'20.10"E	6	Latitude	: 22°48'52.27"N
7	NABL Group	: Atmospheric Pollution	8	Discipline	: Chemical

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS				24 hourly AVG.	LIMIT		
Particulate Matter (PM10)	µg/m <sup>3</sup>	IS 5182 (Part-23): 2006; RA2017	Duration				66	100 (24hrs)		
			11:28 – 19:29	19:37 - 3:28	3:35-11:30					
			68	59	71					
Fine Particulate Matter (PM2.5)	µg/m <sup>3</sup>	USEPA CRF40	28				28	60 (24hrs)		
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-2): 2001; RA2017	Duration						5.7	80 (24hrs)
			11:28 -15:27	15:27- 19:29	19:37- 23:29	23:29- 3:28	3:35 - 7:28	7:28- 11:30		
			9.1	7.9	<5.0	5.8	<5.0	<5.0		
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-6): 2001; RA2017	Duration						31.3	80 (24hrs)
			11:28 -15:27	15:27- 19:29	19:37- 23:29	23:29- 3:28	3:35 - 7:28	7:28- 11:30		
			36.9	39.6	27.7	24.6	21.5	37.2		
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	401; Methods of Air Sampling & Analysis	Duration						14.7	400 (24hrs)
			11:28 -15:27	15:27- 19:29	19:37- 23:29	23:29- 3:28	3:35 - 7:28	7:28- 11:30		
			17.6	15.0	12.6	12.6	17.6	12.7		



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Annexure-VB



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## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/648	Report Release Date	: 17.10.2020
Service Order No.	: 8210003577/CS4	Service Order Date	: 31.07.2020
ULR No	: TC883920000000038P	Schedule	: Monthly( September)

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS	24 hourly AVG.	LIMIT							
Lead * (as Pb)	µg/m <sup>3</sup>	IS 5182 (Part-22): 2004; RA2014	0.02	0.02	1 (24hrs)							
Nickel * (as Ni)	ng/m <sup>3</sup>	SO-IN-MUL-TE- 075	3.6	3.6	20 (Annual)							
arsenic * (as As)	ng/m <sup>3</sup>	SO-IN-MUL-TE- 075	<2.0	<2.0	6 (Annual)							
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	4.25	4.25	5 (Annual)							
Benzo-(a)-Pyrene*	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	<0.20	<0.20	1 (Annual)							
Carbon Monoxide* (CO)	mg/m <sup>3</sup>	EPA 600/P- 99/001F	1.5	1.5	2 (8hrs)							
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Duration					<10.0	100 (8hrs)			
			11:28- 12:30	12:30- 13:29	13:29- 14:29	14:29- 15:27	15:27- 16:30			16:30- 17:25	17:25- 18:28	18:28- 19:29
			<10.0	<10.0	<10.0	<10.0	<10.0			<10.0	<10.0	<10.0
			Duration					<10.0				
			19:37- 20:30	20:30- 21:29	21:29- 22:28	22:28- 23:29	23:29- 00:28			00:28- 1:29	1:29- 2:31	2:31- 3:28
			<10.0	<10.0	<10.0	<10.0	<10.0			<10.0	<10.0	<10.0
			Duration					<10.0				
			3:35- 4:30	4:30- 5:28	5:28- 6:29	6:29- 7:28	7:28- 8:21			8:21- 9:25	9:25- 10:28	10:28- 11:30
			<10.0	<10.0	<10.0	<10.0	<10.0			<10.0	<10.0	<10.0

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

Remarks: 1. (\* ) - Parameters are outsourced to NABL accredited Lab at Kolkata.

Authorized Signatory  
**Dr. Deependra Kumar Sinha**  
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# ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT. LTD.

Annexure-VR



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## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2020/649	Report Release Date : 17.10.2020
Service Order No. : 8210003577/CS4	Service Order Date : 31.07.2020
ULR No : TC883920000000039P	Schedule : Monthly( September)

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AA/54
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Location	: Near LPG Plant
Plant Status	: Operational	Sampling Date	: 14.09.2020 to 15.09.2020
Period of Analysis	: 16.09.2020 to 14.10.2020	Sample Received Date	: 16.09.2020
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 34	2	Barometric Pressure (mmHg) : 750
3	Relative Humidity (%) : 63	4	Weather Condition : Clear
5	Longitude : 86°14'03.80"E	6	Latitude : 22°48'49.67"N
7	NABL Group : Atmospheric Pollution	8	Discipline : Chemical

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS	24 hourly AVG.	LIMIT					
Particulate Matter (PM10)	µg/m <sup>3</sup>	IS 5182 (Part-23): 2006; RA2017	Duration			76	100 (24hrs)			
			10:49 - 18:41	18:48 - 2:44	2:51-10:55					
			81	69	78					
ie Particulate Matter (PM2.5)	µg/m <sup>3</sup>	USEPA CRF40	36			36	60 (24hrs)			
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-2): 2001; RA2017	Duration				5.3	80 (24hrs)		
			10:49 -14:41	14:41-18:41	18:48-22:40	22:40-2:44			2:51 -6:45	6:45-10:55
			7.7	<5.0	5.2	<5.0			<5.0	7.7
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-6): 2001; RA2017	Duration				24.5	80 (24hrs)		
			10:49 -14:41	14:41-18:41	18:48-22:40	22:40-2:44			2:51 -6:45	6:45-10:55
			27.7	33.5	24.6	21.2			18.4	21.5
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	401; Methods of Air Sampling & Analysis	Duration				13.8	400 (24hrs)		
			10:49 -14:41	14:41-18:41	18:48-22:40	22:40-2:44			2:51 -6:45	6:45-10:55
			15.1	12.5	12.6	14.9			12.6	15.1



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**Annexure-VB**  
**ENGINEERING SERVICES PVT. LTD.**  
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 Environmental Pollution Monitoring & Analysis

**TEST REPORT OF AMBIENT AIR QUALITY MONITORING**

Test Report No. : ELES/RNC/2020/649	Report Release Date : 17.10.2020
Service Order No. : 8210003577/CS4	Service Order Date : 31.07.2020
ULR No : TC883920000000039P	Schedule : Monthly( September)

**TEST REPORT**

PARAMETER	Units	TEST PROTOCOL	RESULTS	24 hourly AVG.	LIMIT							
Lead * (as Pb)	µg/m <sup>3</sup>	IS 5182 (Part-22): 2004; RA2014	0.02	0.02	1 (24hrs)							
Nickel * (as Ni)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	3.6	3.6	20 (Annual)							
Arsenic * (as As)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	<2.0	<2.0	6 (Annual)							
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	3.47	3.47	5 (Annual)							
Benzo-(a)-Pyrene*	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	<0.20	<0.20	1 (Annual)							
Carbon Monoxide* (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	1.3	1.3	2 (8hrs)							
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Duration								<10.0	100 (8hrs)
			10:49-11:45	11:45-12:42	12:42-13:44	13:44-14:41	14:41-15:40	15:40-16:42	16:42-17:39	17:39-18:41		
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Duration								<10.0	
			18:48-19:45	19:45-20:42	20:42-21:41	21:41-22:40	22:40-23:42	23:42-00:45	00:45-01:47	01:47-02:44		
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Duration								<10.0	
			2:51-3:49	3:49-4:48	4:48-5:47	5:47-6:45	6:45-7:48	7:48-8:49	8:49-9:50	9:50-10:55		
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		

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

Remarks: 1. ( \* ) - Parameters are out-sourced to NABL accredited Lab at Kolkata.

*Dr. Deependra Kumar Sinha*  
 Dr. Deependra Kumar Sinha  
 Ph. D. Environmental Engg.  
 ELES Pvt. Ltd. Technical Manager



# ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT. LTD.



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## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2020/650	Report Release Date : 17.10.2020
Service Order No. : 8210003577/CS4	Service Order Date : 31.07.2020
ULR No : TC88392000000040P	Schedule : Monthly( September)

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AA/55
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Location	: SR&PL West Side Boundary
Plant Status	: Operational	Sampling Date	: 14.09.2020 to 15.09.2020
Period of Analysis	: 16.09.2020 to 14.10.2020	Sample Received Date	: 16.09.2020
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION			
1	Average Temperature (°C)	: 34	2 Barometric Pressure (mmHg) : 750
3	Relative Humidity (%)	: 63	4 Weather Condition : Clear
5	Longitude	: 86°14'04.71"E	6 Latitude : 22°49'00.82"N
7	NABL Group	: Atmospheric Pollution	8 Discipline : Chemical

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS				24 hourly AVG.	LIMIT		
Particulate Matter (PM10)	µg/m <sup>3</sup>	IS 5182 (Part-23): 2006; RA2017	Duration				60	100 (24hrs)		
			11:12 - 19:11	19:18 - 3:14	3:20-11:10					
			62	52	65					
Fine Particulate Matter (PM2.5)	µg/m <sup>3</sup>	USEPA CRF40	25				25	60 (24hrs)		
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-2): 2001; RA2017	Duration				6.6	80 (24hrs)		
			11:12 -15:09	15:09- 19:11	19:18- 23:12	23:12- 3:14			3:20 - 7:15	7:15- 11:10
			6.9	7.5	<5.0	5.9			9.7	9.3
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-6): 2001; RA2017	Duration				26.6	80 (24hrs)		
			11:12 -15:09	15:09- 19:11	19:18- 23:12	23:12- 3:14			3:20 - 7:15	7:15- 11:10
			30.7	27.4	36.9	24.6			21.3	18.8
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	401; Methods of Air Sampling & Analysis	Duration				14.3	400 (24hrs)		
			11:12 -15:09	15:09- 19:11	19:18- 23:12	23:12- 3:14			3:20 - 7:15	7:15- 11:10
			12.6	15.0	12.6	15.1			12.5	17.9



# ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT. LTD.

*Annexure-VR*



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NABL Accreditation & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis

CIN: U74999JH2018PTC011125

## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2020/650	Report Release Date : 17.10.2020
Service Order No. : 8210003577/CS4	Service Order Date : 31.07.2020
ULR No : TC883920000000040P	Schedule : Monthly( September)

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS	24 hourly AVG.	LIMIT							
Lead * (as Pb)	µg/m <sup>3</sup>	IS 5182 (Part-22): 2004; RA2014	0.02	0.02	1 (24hrs)							
Nickel * (as Ni)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	4.3	4.3	20 (Annual)							
Arsenic * (as As)	ng/m <sup>3</sup>	SO-IN-MUL-TE-075	<2.0	<2.0	6 (Annual)							
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	4.48	4.48	5 (Annual)							
Benzo-(a)-Pyrene*	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	<0.20	<0.20	1 (Annual)							
Carbon Monoxide* (CO)	mg/m <sup>3</sup>	EPA 600/P-99/001F	1.5	1.5	2 (8hrs)							
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Duration								<10.0	100 (8hrs)
			11:12-12:12	12:12-13:10	13:10-14:15	14:15-15:09	15:09-16:11	16:11-17:13	17:13-18:12	18:12-19:11		
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Duration								<10.0	
			19:18-20:15	20:15-21:14	21:14-22:11	22:11-23:12	23:12-00:10	00:10-01:11	01:11-02:12	02:12-03:14		
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
			Duration								<10.0	
			3:20-4:15	4:15-5:16	5:16-6:14	6:14-7:15	7:15-8:16	8:16-9:14	9:14-10:12	10:12-11:10		
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		

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

Remarks: 1. ( \* ) - Parameters are out sourced to NABL accredited Lab at Kolkata.

*Authorised Signatory*  
**Dr. Deependra Kumar Sinha**  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager



Annexure-VB



**ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT. LTD.**  
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**TEST REPORT OF AMBIENT AIR QUALITY MONITORING**

Test Report No. : ELES/RNC/2020/651	Report Release Date : 17.10.2020
Service Order No. : 8210003577/CS4	Service Order Date : 31.07.2020
ULR No : TC88392000000041P	Schedule : Monthly( September)

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AA/56
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Location	: Near Main Gate
Plant Status	: Operational	Sampling Date	: 14.09.2020 to 15.09.2020
Period of Analysis	: 16.09.2020 to 14.10.2020	Sample Received Date	: 16.09.2020
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 34	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 63	4	Weather Condition	: Clear
5	Longitude	: 86°14'13.44"E	6	Latitude	: 22°48'53.88"N
7	NABL Group	: Atmospheric Pollution	8	Discipline	: Chemical

**TEST REPORT**

PARAMETER	Units	TEST PROTOCOL	RESULTS				24 hourly AVG.	LIMIT		
Particulate Matter (PM10)	µg/m³	IS 5182 (Part-23): 2006; RA2017	Duration				72	100 (24hrs)		
			11:40 - 19:39	19:39 - 3:38	3:45-11:38					
			75	64	77					
Fine Particulate Matter (PM2.5)	µg/m³	USEPA CRF40	31				31	60 (24hrs)		
Sulphur Di-Oxide (SO <sub>2</sub> )	µg/m³	IS 5182 (Part-2): 2001; RA2017	Duration				6.5	80 (24hrs)		
			11:40 -15:39	15:39- 19:39	19:45- 23:39	23:39- 3:38			3:45 - 7:39	7:39- 11:38
			6.3	7.2	<5.0	10.8			5.2	5.7
Nitrogen Di-Oxide (NO <sub>2</sub> )	µg/m³	IS 5182 (Part-6): 2001; RA2017	Duration				28.1	80 (24hrs)		
			11:40 -15:39	15:39- 19:39	19:45- 23:39	23:39- 3:38			3:45 - 7:39	7:39- 11:38
			24.6	39.6	30.5	24.6			21.5	27.7
Ammonia (NH <sub>3</sub> )	µg/m³	401; Methods of Air Sampling & Analysis	Duration				15.5	400 (24hrs)		
			11:40 -15:39	15:39- 19:39	19:45- 23:39	23:39- 3:38			3:45 - 7:39	7:39- 11:38
			12.6	17.5	17.5	15.1			15.1	15.1

**"Saving Environment will only save the Future"**



# ENVIRONMENTAL LABORATORIES &

Annexure-VB



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## TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Test Report No. : ELES/RNC/2020/651	Report Release Date : 17.10.2020
Service Order No. : 8210003577/CS4	Service Order Date : 31.07.2020
ULR No : TC883920000000041P	Schedule : Monthly( September)

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS	24 hourly AVG.	LIMIT							
Lead * (as Pb)	µg/m <sup>3</sup>	IS 5182 (Part-22): 2004; RA2014	0.02	0.02	1 (24hrs)							
Nickel * (as Ni)	ng/m <sup>3</sup>	SO-IN-MUL-TE- 075	3.6	3.6	20 (Annual)							
Arsenic * (as As)	ng/m <sup>3</sup>	SO-IN-MUL-TE- 075	<2.0	<2.0	6 (Annual)							
Benzene * (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ASTM D3687:2007	2.06	2.06	5 (Annual)							
Benzo-(a)-Pyrene*	ng/m <sup>3</sup>	USEPA 8270 C TO- 13A	<0.20	<0.20	1 (Annual)							
Carbon Monoxide* (CO)	mg/m <sup>3</sup>	EPA 600/P- 99/001F	1.6	1.6	2 (8hrs)							
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	IS 5182 (Part-9): 1974; RA2014	Duration						<10.0	100 (8hrs)		
			11:40-12:39	12:39-13:37	13:37-14:38	14:38-15:39	15:39-16:40	16:40-17:38			17:38-18:37	18:37-19:39
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0			<10.0	<10.0
			Duration						<10.0			
			19:45-20:40	20:40-21:42	21:42-22:41	22:41-23:39	23:39-00:40	00:40-01:39			01:39-02:37	02:37-03:38
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0			<10.0	<10.0
			Duration						<10.0			
			3:45-4:40	4:40-5:39	5:39-6:38	6:38-7:39	7:39-8:40	8:40-9:42			9:42-10:41	10:41-11:38
			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0			<10.0	<10.0

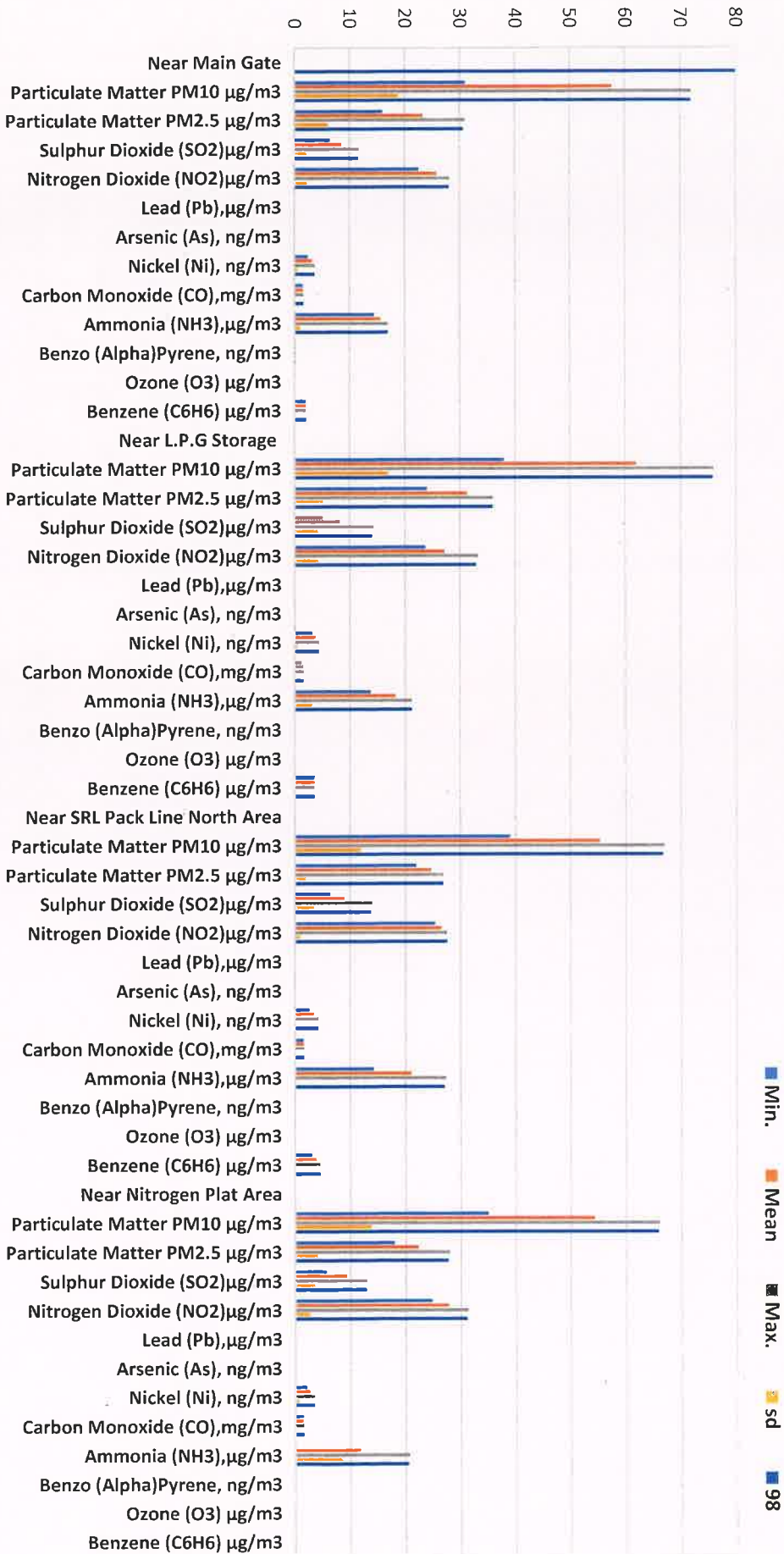
\*\*\*\*End of Report\*\*\*\*

Remarks: 1. ( \* ) - Parameters are out sourced to NABL accredited Lab at Kolkata.

Authorized Signatory  
**Dr. Deependra Kumar Sinha**  
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ELES Pvt. Ltd. Technical Manager



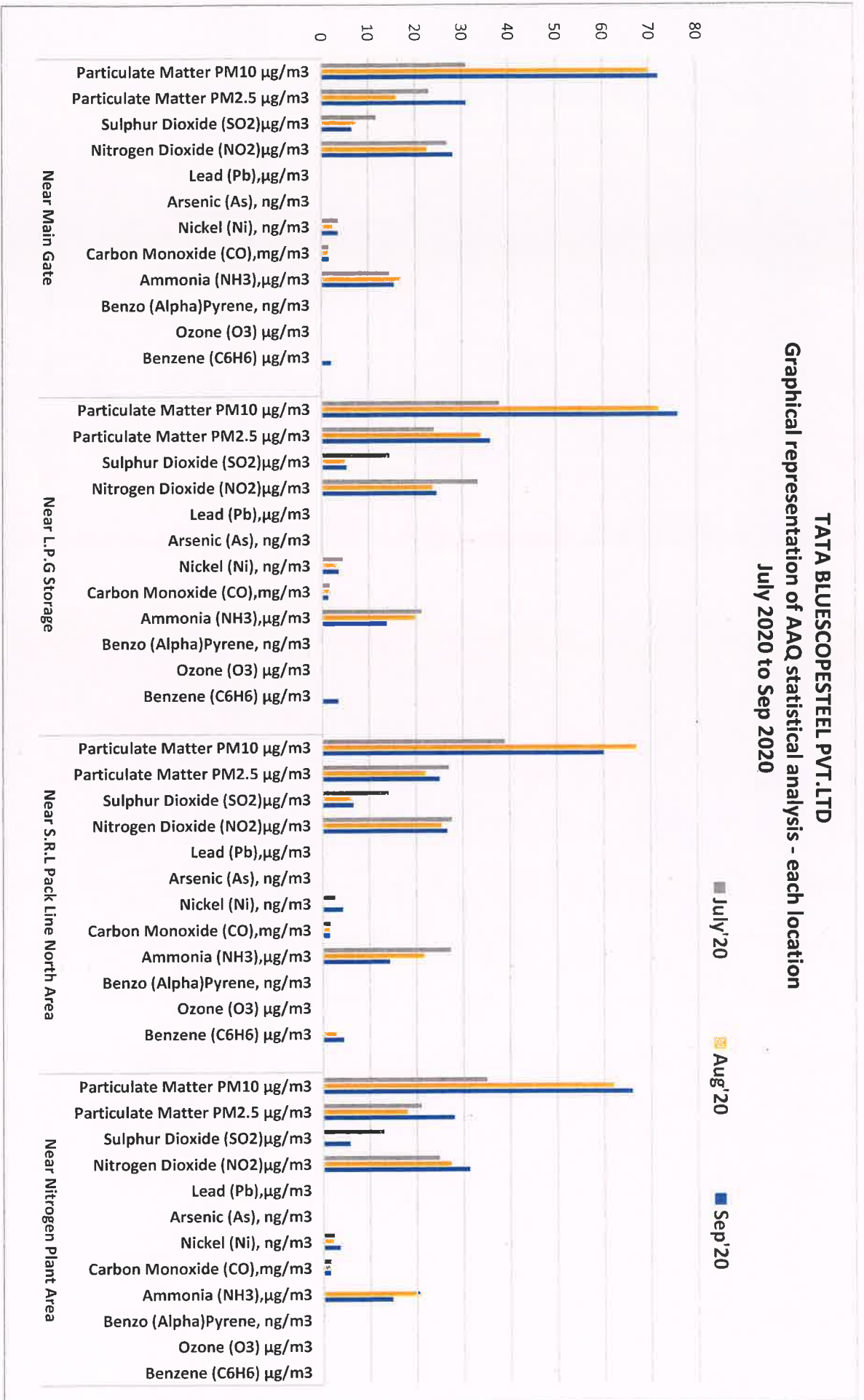
**TATA BLUESCOPESTEEL PVT.LTD**  
**Graphical representation of AAQ statistical analysis - each location**  
**July 2020 to Sep 2020**



Annexure - VC

TATA BLUESCOPESTEEL PVT.LTD

Graphical representation of AAQ statistical analysis - each location  
July 2020 to Sep 2020





# ENVIRONMENTAL LABORATORIES & Annexure-VI

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## TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

<b>Test Report No. : ELES/RNC/2020/556</b>		<b>Report Release Date : 16.09.2020</b>	
<b>LOA No. : FY 20-21</b>		<b>Work Order Date : 20.07.2020</b>	
<b>ULR No. : TC88392000000023P</b>		<b>Schedule : Quarterly</b>	
<b>CUSTOMER DETAILS</b>		<b>SAMPLE DETAILS</b>	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/PCB/SM/40
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum	Location	: M.C.L Furnace Stack
Plant Status	: Operational	Sampling Date	: 22.08.2020
		Sample Received Date	: 24.08.2020
		Type of Sample	: Flue Gas
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved
Period of Analysis	: 24.08.2020 to 15.09.2020		

### GENERAL INFORMATION

1	Particular of the Plant	: Steel Coated Plant
2	Emission Due to	: Process Activity
3	Stack Connected to	: M.C.L Furnace
4	Material of Construction of Duct	: M.S
5	Stack Height from Ground Level (m)	: 45.0
6	Height of Sampling Port from Ground Level (m)	: 29.50
7	Inner Diameter of Stack at Sampling Point (m)	: 2.0
8	Shape of the Stack	: Circular
9	Working Load of the Stack	: --
10	Pollution Control System	: --
11	Ladder & Platform	: Permanent

### FUEL CHARACTERISTICS DETAILS

1	Type of Fuel Used	: LPG
2	Fuel Consumption	: 571 Kg/hr
3	Calorific Value of Fuel (Kcal/Kg)	: --

### TEST REPORT

PARAMETER	UNITS	TEST PROTOCOL	RESULTS
Particulate Matter (PM)	mg/Nm <sup>3</sup>	IS 11255(Part 1):1985; RA 2014	27
Sulphur Di-Oxide (SO <sub>2</sub> )**	mg/Nm <sup>3</sup>	USEPA 6A	12
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	USEPA 2008 (Method-7E)	59
Flue Gas Temperature	°C	IS 11255 (Part 3): 2008; RA 2018	255
Barometric Pressure	mmHg	IS 11255 (Part 3): 2008; RA 2018	750
Velocity of Flue Gas	m/sec	IS 11255 (Part 3): 2008; RA 2018	8.15
Quantity of Gas Flow	Nm <sup>3</sup> /hr	IS 11255 (Part 3): 2008; RA 2018	45194.05
Carbon Di- Oxide**	%	USEPA 3B	1.5
Oxygen**	%	USEPA 3B	18.6
Carbon Monoxide**	%	USEPA 3B	0.012
Percentage of Moisture**	%	USEPA 3B	1.7



# ENVIRONMENTAL LABORATORIES & *Annexure-V*

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### TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

Test Report No. : ELES/RNC/2020/556		Report Release Date : 16.09.2020	
LOA No. : FY 20-21		Work Order Date : 20.07.2020	
ULR No. : TC883920000000023P		Schedule : Quarterly	
PARAMETER	UNITS	TEST PROTOCOL	RESULTS
<b>Volatile Organic Carbon (VOC)</b>			
Benzene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Toluene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Tert-Butylbenzene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
1,1,1-Trichloroethane*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Dichloromethane*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	15.08

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

- Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.  
2. (\*\*) - Parameters are not under NABL Scope.

*Authorised Signatory*  
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# ENVIRONMENTAL LABORATORIES & *Annexure-VIA* ENGINEERING SERVICES PVT. LTD.

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## TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/554	Report Release Date	: 16.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No.	: TC88392000000021P	Schedule	: Quarterly
<b>CUSTOMER DETAILS</b>		<b>SAMPLE DETAILS</b>	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/PCB/SM/38
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum	Location	: Paint Baking Oven Stack (CPL)
Plant Status	: Operational	Sampling Date	: 21.08.2020
		Sample Received Date	: 24.08.2020
		Type of Sample	: Flue Gas
		Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved
Period of Analysis	: 24.08.2020 to 15.09.2020		

### GENERAL INFORMATION

1	Particular of the Plant	: Steel Coated Plant
2	Emission Due to	: Process Activity
3	Stack Connected to	: Paint Baking Oven (CPL)
4	Material of Construction of Duct	: M.S
5	Stack Height from Ground Level (m)	: 36.0
6	Height of Sampling Port from Ground Level (m)	: 11.45
7	Inner Diameter of Stack at Sampling Point (m)	: 2.0
8	Shape of the Stack	: Circular
9	Working Load of the Stack	: --
10	Pollution Control System	: --
11	Ladder & Platform	: Permanent

### FUEL CHARACTERISTICS DETAILS

1	Type of Fuel Used	: LPG
2	Fuel Consumption	: 330Kg/hr
3	Calorific Value of Fuel (Kcal/Kg)	: --

### TEST REPORT

PARAMETER	UNITS	TEST PROTOCOL	RESULTS
Particulate Matter (PM)	mg/Nm <sup>3</sup>	IS 11255(Part 1):1985; RA 2014	16
Sulphur Di-Oxide (SO <sub>2</sub> )**	mg/Nm <sup>3</sup>	USEPA 6A	B.D.L
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	USEPA 2008 (Method-7E)	23.0
Flue Gas Temperature	°C	IS 11255 (Part 3): 2008; RA 2018	185
Barometric Pressure	mmHg	IS 11255 (Part 3): 2008; RA 2018	750
Velocity of Flue Gas	m/sec	IS 11255 (Part 3): 2008; RA 2018	13.44
Quantity of Gas Flow	Nm <sup>3</sup> /hr	IS 11255 (Part 3): 2008; RA 2018	86654.18
Carbon Di- Oxide**	%	USEPA 3B	1.3
Oxygen**	%	USEPA 3B	19.0
Carbon Monoxide**	%	USEPA 3B	0.036
Percentage of Moisture**	%	USEPA 3B	1.3



# ENVIRONMENTAL LABORATORIES &

Annexure-VIA

## ENGINEERING SERVICES PVT. LTD.

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### TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

Test Report No. : ELES/RNC/2020/554	Report Release Date : 16.09.2020		
LOA No. : FY 20-21	Work Order Date : 20.07.2020		
ULR No. : TC883920000000021P	Schedule : Quarterly		
PARAMETER	UNITS	TEST PROTOCOL	RESULTS
<b>Volatile Organic Carbon (VOC)</b>			
Benzene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Toluene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Tert-Butylbenzene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
1,1,1-Trichloroethane*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Dichloromethane*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	12.3

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

- Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.  
2. (\*\*) - Parameters are not under NABL Scope.

Authorised Signatory

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# ENVIRONMENTAL LABORATORIES &

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IN: U74999JH2018PTC011125

### TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

Test Report No. : ELES/RNC/2020/688	Report Release Date : 29.10.2020
Service Order No. : 8210003577/CS4	Service Order Date : 31.07.2020
ULR No. : TC88392000000061P	Schedule : Quarterly(Jul'20-Sep'20)
<b>CUSTOMER DETAILS</b>	
Customer Name : Tata Blue Scope Steel Limited	Sample Ref. No. : ELES/RNC/2020/SM/60
Address : At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum	Location : Near D.G Room
Plant Status : Operational	Sampling Date : 22.09.2020
Period of Analysis : 25.09.2020 to 27.10.2020	Sample Received Date : 25.09.2020
	Type of Sample : Flue Gas
	Sampling Procedure : ELES/DOC/SMPL/02
	Sample Drawn By : ELES Pvt. Ltd.
	Sample Condition : Sealed & Preserved

#### 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.01
4	Material of Construction of Duct	: M.S
5	Stack Height from Ground Level (m)	: 30.0
6	Height of Sampling Port from Ground Level (m)	: 7.0
7	Inner Diameter of Stack at Sampling Point (m)	: 0.35
8	Shape of the Stack	: Circular
9	Working Load of the Stack	: 1500 KV
10	Pollution Control System	: --
11	Ladder & Platform	: Permanent

#### FUEL CHARACTERISTICS DETAILS

1	Type of Fuel Used	: H.S.D
2	Fuel Consumption	: 192 lit/hr
3	Calorific Value of Fuel (Kcal/Kg)	: --

#### TEST REPORT

PARAMETER	UNITS	TEST PROTOCOL	RESULTS
Particulate Matter (PM)	mg/Nm <sup>3</sup>	IS 11255(Part 1):1985; RA 2014	32
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	USEPA 2008 (Method-7E)	141
Flue Gas Temperature	°C	IS 11255 (Part 3): 2008; RA 2018	135
Barometric Pressure	mmHg	IS 11255 (Part 3): 2003; RA 2018	750
Velocity of Flue Gas	m/sec	IS 11255 (Part 3): 2008; RA 2018	10.07
Quantity of Gas Flow	Nm <sup>3</sup> /hr	IS 11255 (Part 3): 2008; RA 2018	2468.86



# ENVIRONMENTAL LABORATORIES &

Annexure-VI/B



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## TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

Test Report No. : ELES/RNC/2020/688	Report Release Date : 29.10.2020		
Service Order No. : 8210003577/CS4	Service Order Date : 31.07.2020		
ULR No. : TC883920000000061P	Schedule : Quarterly (Jul'20-Sep'20)		
PARAMETER	UNITS	TEST PROTOCOL	RESULTS
Sulphur Di-Oxide (SO <sub>2</sub> )**	mg/Nm <sup>3</sup>	USEPA 6A	B.D.L (D.L:3.0)
Carbon Monoxide**	mg/Nm <sup>3</sup>	USEPA 10 B	<1.0
Carbon Di- Oxide**	%	USEPA 3A	2.36
Oxygen**	%	USEPA 3A	17.8
Percentage of Moisture**	%	IS 11255 Part -5:1985, RA 2003	<1.0
Benzene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Toluene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Tert-Butylbenzene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
1,1,1-Trichloroethane*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Dichloromethane*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	69.53

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

- Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.  
2. (\*\*) - Parameters are not under NABL Scope.

Authorised Signatory

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ELES Pvt. Ltd. Technical Manager





# ENVIRONMENTAL LABORATORIES &

Annexure-VIC

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TC-8839

## TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

Test Report No. : ELES/RNC/2020/557	Report Release Date : 16.09.2020
LOA No. : FY 20-21	Work Order Date : 20.07.2020
ULR No. : TC883920000000024P	Schedule : Quarterly
<b>CUSTOMER DETAILS</b>	
Customer Name : Tata Blue Scope Steel Limited	Sample Ref. No. : ELES/RNC/PCB/SM/41
Address : At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum	Location : D.G Stack -02
Plant Status : Operational	Sampling Date : 19.08.2020
	Sample Received Date : 24.08.2020
	Type of Sample : Flue Gas
	Sampling Procedure : ELES/DOC/SMPL/02
	Sample Drawn By : ELES Pvt. Ltd.
	Sample Condition : Sealed & Preserved
Period of Analysis : 24.08.2020 to 15.09.2020	

### 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 - 02
4	Material of Construction of Duct	: M.S
5	Stack Height from Ground Level (m)	: 30.0
6	Height of Sampling Port from Ground Level (m)	: 7.0
7	Inner Diameter of Stack at Sampling Point (m)	: 0.35
8	Shape of the Stack	: Circular
9	Working Load of the Stack	: 1500 KVA
10	Pollution Control System	: --
11	Ladder & Platform	: Permanent

### FUEL CHARACTERISTICS DETAILS

1	Type of Fuel Used	: HSD
2	Fuel Consumption	: 192 Lit/hr
3	Calorific Value of Fuel (Kcal/Kg)	: --

### TEST REPORT

PARAMETER	UNITS	TEST PROTOCOL	RESULTS
Particulate Matter (PM)	mg/Nm <sup>3</sup>	IS 11255(Part 1):1985: RA 2014	35
Sulphur Di-Oxide (SO <sub>2</sub> )**	mg/Nm <sup>3</sup>	USEPA 6A	B.D.L
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	USEPA 2008 (Method-7E)	248
Flue Gas Temperature	°C	IS 11255 (Part 3): 2008; RA 2018	165
Barometric Pressure	mmHg	IS 11255 (Part 3): 2008; RA 2018	750
Velocity of Flue Gas	m/sec	IS 11255 (Part 3): 2008; RA 2018	10.19
Quantity of Gas Flow	Nm <sup>3</sup> /hr	IS 11255 (Part 3): 2008; RA 2018	2172.80
Carbon Di- Oxide**	%	USEPA 3B	2.3
Oxygen**	%	USEPA 3B	17.8
Carbon Monoxide**	%	USEPA 3B	0.030
Percentage of Moisture**	%	USEPA 3B	1.0



CIN: U74999JH2018PTC011125

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## Annexure-VI ENGINEERING SERVICES PVT. LTD.

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### TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

Test Report No. : ELES/RNC/2020/557	Report Release Date : 16.09.2020		
LOA No. : FY 20-21	Work Order Date : 20.07.2020		
ULR No. : TC883920000000024P	Schedule : Quarterly		
PARAMETER	UNITS	TEST PROTOCOL	RESULTS
<b>Volatile Organic Carbon (VOC)</b>			
Benzene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	6.56
Toluene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Tert-Butylbenzene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
1,1,1-Trichloroethane*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Dichloromethane*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	17.25

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

- Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.  
2. (\*\*) - Parameters are not under NABL Scope.

Authorised Signatory  
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CIN: U74999JH2018PTC011125

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## TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

<b>Test Report No.</b> : ELES/RNC/2020/555	<b>Report Release Date</b> : 16.09.2020
<b>LOA No.</b> : FY 20-21	<b>Work Order Date</b> : 20.07.2020
<b>ULR No.</b> : TC883920000000022P	<b>Schedule</b> : Quarterly
<b>CUSTOMER DETAILS</b>	
<b>Customer Name</b> : Tata Blue Scope Steel Limited	<b>Sample Ref. No.</b> : ELES/RNC/PCB/SM/39
<b>Address</b> : At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum	<b>Location</b> : Boiler Stack
<b>Plant Status</b> : Operational	<b>Sampling Date</b> : 21.08.2020
	<b>Sample Received Date</b> : 24.08.2020
	<b>Type of Sample</b> : Flue Gas
	<b>Sampling Procedure</b> : ELES/DOC/SMPL/02
	<b>Sample Drawn By</b> : ELES Pvt. Ltd.
	<b>Sample Condition</b> : Sealed & Preserved
<b>Period of Analysis</b> : 24.08.2020 to 15.09.2020	

### GENERAL INFORMATION

1	Particular of the Plant	: Steel Coated Plant
2	Emission Due to	: Process Activity
3	Stack Connected to	: Boiler Stack
4	Material of Construction of Duct	: M.S
5	Stack Height from Ground Level (m)	: 32.0
6	Height of Sampling Port from Ground Level (m)	: 15.0
7	Inner Diameter of Stack at Sampling Point (m)	: 1.045
8	Shape of the Stack	: Circular
9	Working Load of the Stack	: --
10	Pollution Control System	: --
11	Ladder & Platform	: Permanent

### FUEL CHARACTERISTICS DETAILS

1	Type of Fuel Used	: LPG
2	Fuel Consumption	: 290 Kg/hr
3	Calorific Value of Fuel (Kcal/Kg)	: --

### TEST REPORT

PARAMETER	UNITS	TEST PROTOCOL	RESULTS
Particulate Matter (PM)	mg/Nm <sup>3</sup>	IS 11255(Part 1):1985: RA 2014	24
Sulphur Di-Oxide (SO <sub>2</sub> )**	mg/Nm <sup>3</sup>	USEPA 6A	B.D.L
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	USEPA 2008 (Method-7E)	80
Flue Gas Temperature	°C	IS 11255 (Part 3): 2008; RA 2018	140
Barometric Pressure	mmHg	IS 11255 (Part 3): 2008; RA 2018	750
Velocity of Flue Gas	m/sec	IS 11255 (Part 3): 2008; RA 2018	7.80
Quantity of Gas Flow	Nm <sup>3</sup> /hr	IS 11255 (Part 3): 2008; RA 2018	14668.39
Carbon Di- Oxide**	%	USEPA 3B	6.9
Oxygen**	%	USEPA 3B	11.6
Carbon Monoxide**	%	USEPA 3B	<0.001
Percentage of Moisture**	%	USEPA 3B	6.3



CIN: U74999JH2018PTC011125

# ENVIRONMENTAL LABORATORIES &

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Annexure-VIS



### TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

Test Report No. : ELES/RNC/2020/555	Report Release Date : 16.09.2020		
LOA No. : FY 20-21	Work Order Date : 20.07.2020		
ULR No. : TC883920000000022P	Schedule : Quarterly		
PARAMETER	UNITS	TEST PROTOCOL	RESULTS
<b>Volatile Organic Carbon (VOC)</b>			
Benzene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Toluene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Tert-Butylbenzene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
1,1,1-Trichloroethane*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Dichloromethane*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	9.21

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

- Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.  
2. (\*\*) - Parameters are not under NABL Scope.

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Annexure - VI



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## TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

Test Report No. : ELES/RNC/2020/689		Report Release Date : 29.10.2020	
Service Order No. : 8210003577/CS4		Service Order Date : 31.07.2020	
ULR No. : TC883920000000062P		Schedule : Quarterly(Jul'20-Sep'20)	
<b>CUSTOMER DETAILS</b>		<b>SAMPLE DETAILS</b>	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/SM/61
Address	: At. Bara, P.O- Agrico,	Location	: Near Safety Office
	Jamshedpur- 831009, Dist.- East Singhbhum	Sampling Date	: 22.09.2020
Plant Status	: Operational	Sample Received Date	: 25.09.2020
		Type of Sample	: Flue Gas
Period of Analysis	: 25.09.2020 to 27.10.2020	Sampling Procedure	: ELES/DOC/SMPL/02
		Sample Drawn By	: ELES Pvt. Ltd.
		Sample Condition	: Sealed & Preserved

### GENERAL INFORMATION

1	Particular of the Plant	: Steel Coated Plant
2	Emission Due to	: Process Activity
3	Stack Connected to	: Incinerator Primary Chamber
4	Material of Construction of Duct	: M.S
5	Stack Height from Ground Level (m)	: 30.0
6	Height of Sampling Port from Ground Level (m)	: 12.0
7	Inner Diameter of Stack at Sampling Point (m)	: 1.0
8	Shape of the Stack	: Circular
9	Working Load of the Stack	: 78 Kg/hr
10	Pollution Control System	: --
11	Ladder & Platform	: Permanent

### FUEL CHARACTERISTICS DETAILS

1	Type of Fuel Used	: Propane
2	Fuel Consumption	: 25-30 Kg/hr
3	Calorific Value of Fuel (Kcal/Kg)	: 11860

### TEST REPORT

PARAMETER	UNITS	TEST PROTOCOL	RESULTS
Particulate Matter (PM)	mg/Nm <sup>3</sup>	IS 11255(Part 1):1985; RA 2014	18
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	USEPA 2008 (Method-7E)	84
Flue Gas Temperature	°C	IS 11255 (Part 3): 2008; RA 2018	80
Barometric Pressure	mmHg	IS 11255 (Part 3): 2008; RA 2018	750
Velocity of Flue Gas	m/sec	IS 11255 (Part 3): 2008; RA 2018	4.33
Quantity of Gas Flow	Nm <sup>3</sup> /hr	IS 11255 (Part 3): 2003; RA 2018	9204.48



# ENVIRONMENTAL LABORATORIES &

Annexure-VI



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## TEST REPORT OF FLUE GAS EMISSION QUALITY MONITORING

Test Report No. : ELES/RNC/2020/689	Report Release Date : 29.10.2020		
Service Order No. : 8210003577/CS4	Service Order Date : 31.07.2020		
ULR No. : TC883920000000062P	Schedule : Quarterly(Jul'20-Sep'20)		
PARAMETER	UNITS	TEST PROTOCOL	RESULTS
Sulphur Di-Oxide (SO <sub>2</sub> )**	mg/Nm <sup>3</sup>	USEPA 6A	14.3
Carbon Monoxide**	mg/Nm <sup>3</sup>	USEPA 10 B	<1.0
Carbon Di- Oxide**	%	USEPA 3A	4.51
Oxygen**	%	USEPA 3A	15.6
Percentage of Moisture**	%	IS 11255 Part -3:1985,RA 2003	2.6
Benzene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Toluene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Tert-Butylbenzene*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
1,1,1-Trichloroethane*	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	<0.20
Dichloromethane**	µg/m <sup>3</sup>	USEPA 8260 B + ASTM D 3686 & 3687:2007	3.05

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

- Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.  
2. (\*\*) - Parameters are not under NABL Scope.

Authorised Signatory

Dr. Deependra Kumar Sinha  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager

## Occupational Health Monitoring Programmes

Sr. No.	Type of Medical Examination	Details		Frequency
		Before Employment	Will undergo Medical checkup once in 12 month.	
1	Pre-Employment Medical Checkup			once
2	All Employee			Annual
3	Examination of Eye site and colour vision of certain workers such as crane, Locomotive, Fork lift, Payloaders, Dumpers or other outomobiles operators as well as workers involved in giving signal to crane or locomotive operator.	As per Bihar / Jharkhand factory rules (1) No person shall be employed to operate crane, Locomotive and forklift pay loader, Dumper or other outomobiles or to give signals to a crane operator or locomotive operator unless his eye sight and colour vision have been examined by qualified ophthalmologist, approve by the inspector and declare fit to work whether or without the use of corrective glasses. The eye-sight and colour vision of person employed as referred shall be examined once in a period of 12 month up to age of 45 and once in six month beyond that age.		Once in a up to age of 45 beyond that once in six month.
4	Workers employed in hazardous process	6 month general checkup to assertion in the health status of all workers in respect of occupational health hazards to which they are exposed and in cases where in the opinion of factory medical officer it is necessary to do so in shorter interval in respect of any worker. b) The details of pre-employment and and periodical examination carried out as afforsaid shall be recorded in health register in form no 24 C) No person shall be employed for first time without a certificate of fitness in form no 33 granted by factory medical officer. d) Any finding of factory medical officer revealing any abnormality or unsuitability of any person employed in process shall immediately be reported to certifying surgeon who shall in turn, examine the concerned worker and communicate his finding to occupier within 30 days. If the certifying surgeon is of opinion that workers so examined is required to be taken away from process for health protection he will direct the occupier accordingly, who shall not employ the said worker in the same process. However the worker so taken away be provided with alternate placement unless he is fully incapacitated, in opinion of the certifying surgeon, in which case the worker affected shall be suitably rehabilitated. Provided that the certifying surgeon on his own may examine any worker when he considers it necessary to do so for ascertaining the suitability of his employment in the hazardous process of for ascertaining the health status of any worker. E) The workers taken away from employment in any process under sub rules may be employed again in same process only after obtaining the fitness certificate from certifying surgeon and after making entry to that effect in health register.		Once in six month
5	Person involved in handling of Chronic compound	every worker involved in in should be examined by M.O at least twice in every week and by certifying surgeon at least in three months.		Twice in week by M.O. And By certifying surgeon once in three month
6	Person involved in molten metal area	6 month general checkup and special check up for Eye		Once in six month
7	Person involved in high noise level	Will be examined by certifying surgeon within 14 days of first employment and thereafter in every 12 months. (Audiometry examination )		

## Medical Report Details of Employees

Sr.No	Name of Employee	Age	Sex	Department	Date of medical Examination.	Status
1	AVISHEK KR. SRIVASTAVA	32Y	Male	Mech.Maint.	19/12/2019	Fit
2	AMIT KUMAR SINGH	34Y	Male	SRL	19/12/2019	Fit
3	YOGESH KR.SINGH	46Y	Male	Mech.Maint.	19/12/2019	Fit
4	RAKESH RANJAN	28Y	Male	Mech.Maint.	19/12/2019	Fit
5	PALLAB CHOUDHARY	36Y	Male	SRL	19/12/2019	Fit
6	ROHIT	34Y	Male	SRL & PL	19/12/2019	Fit
7	SWAPAN PAUL	30Y	Male	SRL	19/12/2019	Fit
8	AMIT MATE	32Y	Male	CPL-Operation	19/12/2019	Fit
9	AMRESH KUMAR JHA	45Y	Male	PPC	19/12/2019	Fit
10	AMITABH KUMAR JHA	42Y	Male	Elect.maint.	19/12/2019	Fit
11	ABHIJIT KUMAR	32Y	Male	Utility	19/12/2019	Fit
12	ANIL KUMAR YADAV	37Y	Male	Utility	19/12/2019	Fit
13	MD.EZAZUL HAQUE	33Y	Male	CPL-Operation	19/12/2019	Fit
14	DEBADATTA SAHU	36Y	Male	CPL-Operation	19/12/2019	Fit
15	NIHAR RANJAN	41Y	Male	CPL-Operation	19/12/2019	Fit
16	VIVEK KUMAR	27Y	Male	CPL-Operation	19/12/2019	Fit
17	VINOD SHELAR	44Y	Male	CPL-Operation	19/12/2019	Fit
18	RAVI UPADHYAY	30Y	Male	CPL-Operation	19/12/2019	Fit
19	ARINDAM BANERJEE	39Y	Male	Procurement	19/12/2019	Fit
20	ANINDYA BANERJEE	51Y	Male	Utility	19/12/2019	Fit
21	VIPIN JAIN	41Y	Male	MCL-Operation	19/12/2019	Fit
22	SANJEEV KUMAR SINGH	46Y	Male	Store	19/12/2019	Fit
23	DYUTIMAN HAZRA	46Y	Male	Procurement	19/12/2019	Fit
24	VIJAY KUMAR OJHA	38Y	Male	Procurement	19/12/2019	Fit
25	PANKAJ MISHRA	46Y	Male	Procurement	19/12/2019	Fit
26	ADITYA RAJ	29Y	Male	Logistics	19/12/2019	Fit
27	HARERAM SINGH	43Y	Male	Utility	19/12/2019	Fit
28	SANJEEV KUMAR	39Y	Male	PPC	19/12/2019	Fit
29	MUSKAN SINHA	20Y	Female	Procurement	20/12/2019	Fit
30	REYA HEMBROM	19Y	Female	Utility	20/12/2019	Fit
31	SIDDHARTH SHANKAR	44Y	Male	Finance	20/12/2019	Fit
32	ANIL EKKA	37Y	Male	Mech.Maint.	20/12/2019	Fit
33	RAHUL DAS	34Y	Male	Mech.Maint.	20/12/2019	Fit
34	DEV MIDYA	40Y	Male	Elect.maint.	20/12/2019	Fit
35	VIVEK AGARWAL	34 Y	Male	Procurement	20/12/2019	Fit
36	DIVYARAJ CHANDRA VANSHI	23 Y	Female	MCL-Operation	20/12/2019	Fit
37	PUSHPESH THAKUR	40 Y	Male	Logistics	20/12/2019	Fit
38	RAM ESHWAR PD.AHIRWAL	43 Y	Male	Elect.maint.	20/12/2019	Fit
39	ANKUR CHATURVEDI	31 Y	Male	Elect.maint.	20/12/2019	Fit



## Medical Report Details of Employees

Sr.No	Name of Employee	Age	Sex	Department	Date of medical Examination.	Status
40	MANISH UPADHYAY	44 Y	Male	IT & Automation	20/12/2019	Fit
41	GIREESH CHANDRA YADAV	35Y	Male	PPC	20/12/2019	Fit
42	RAVINDRA PATIL	43Y	Male	Mech.Maint.	20/12/2019	Fit
43	BISWAJIT MANDAL	42Y	Male	Mech.Maint.	20/12/2019	Fit
44	JEEVAN WAHURWAGH	38Y	Male	Mech.Maint.	20/12/2019	Fit
45	BINAY PRASAD	41Y	Male	PPC	20/12/2019	Fit
46	KRISHNA DAS LAYEK	40Y	Male	IT & Automation	20/12/2019	Fit
47	CHINMAY DUBEY	32Y	Male	Elect.maint.	20/12/2019	Fit
48	PRADEEP SHUKLA	33Y	Male	Elect.maint.	20/12/2019	Fit
49	GANESH CHAVAN	38Y	Male	Store	20/12/2019	Fit
50	YOGESH SHARMA	33Y	Male	MCL-Operation	20/12/2019	Fit
51	SURENDRA KR.CHOUDHARY	41Y	Male	Elect.maint.	20/12/2019	Fit
52	TIKE CHAND DEEP	39Y	Male	CPL-Operation	20/12/2019	Fit
53	PAWAN KR.SINGH	32Y	Male	CPL-Operation	20/12/2019	Fit
54	G.V.V.N.SRINU	30Y	Male	Logistics	20/12/2019	Fit
55	M.NAVIN KUDVA	44Y	Male	IT System	20/12/2019	Fit
56	PRABHAT KR.SINGH	46Y	Male	Mech.Maint.	20/12/2019	Fit
57	MUZHAFID ALI KHAN	34Y	Male	Mech.Maint.	20/12/2019	Fit
58	BALU PATIL	30Y	Male	CPL-Operation	20/12/2019	Fit
59	RANGIA JAMUDA	37Y	Male	CPL-Operation	20/12/2019	Fit
60	S.C.SAHOO	54Y	Male	Mech.Maint.	20/12/2019	Fit
61	MAKARAND BONGULWAR	44Y	Male	Mech.Maint.	20/12/2019	Fit
62	RAVIKANT	34Y	Male	CPL-Operation	20/12/2019	Fit
63	RANJAN PRASAD	45Y	Male	Elect.maint.	20/12/2019	Fit
64	BIMAL KUMAR SAMAL	31Y	Male	PPC	20/12/2019	Fit
65	DEEPAK KESHARI	36Y	Male	PPC	20/12/2019	Fit
66	SANJAY PANDEY	45Y	Male	IT System	20/12/2019	Fit
67	SHAKTIPADA MAHATO	33Y	Male	Elect.maint.	20/12/2019	Fit
68	ABHIJIT KUMAR	31Y	Male	Utility	20/12/2019	Fit
69	SRIKANT KR.VERMA	44Y	Male	Elect.maint.	20/12/2019	Fit
70	PANKAJ JHA	37Y	Male	Elect.maint.	20/12/2019	Fit
71	DEEPAK KR.MISHRA	30Y	Male	MCL-Operation	20/12/2019	Fit
72	VIKASH RATHORE	30Y	Male	MCL-Operation	20/12/2019	Fit
73	SHAILESH KUMAR	41Y	Male	Quality Assurance	20/12/2019	Fit
74	RANDHIR KUMAR	42Y	Male	Quality Assurance	20/12/2019	Fit
75	RAVINDRA NATH SINGH	37Y	Male	Quality Assurance	20/12/2019	Fit
76	PRAKASH VISHWAKARMA	39Y	Male	CPL-Operation	20/12/2019	Fit
77	ANIRBAN BANERJEE	30Y	Male	SRL	20/12/2019	Fit
78	AMOL SHINTRE	37Y	Male	SRL	20/12/2019	Fit
79	PANKAJ BANKEY	35Y	Male	Logistics	20/12/2019	Fit

## Medical Report Details of Employees

80	NISHANT GAUTAM	41Y	Male	Logistics	20/12/2019	Fit
81	NISHA PAUNIKAR	26Y	Male	Procurement	20/12/2019	Fit
82	AMRITA KUMARI	27Y	Female	PPC	20/12/2019	Fit
83	PANKAJ SINGH	30Y	Male	Quality Assurance	20/12/2019	Fit
84	BRAJESH CHANDRA	34Y	Male	Quality Assurance	20/12/2019	Fit
85	NAVNEET GAURAV	34Y	Male	Quality Assurance	20/12/2019	Fit
86	GOURAV SHUKLA	26Y	Male	Quality Assurance	20/12/2019	Fit
87	ANUPAM SINGH	36Y	Male	Quality Assurance	20/12/2019	Fit
88	AJAY PASWAN	39Y	Male	Quality Assurance	20/12/2019	Fit
89	MANJEET SINGH	36Y	Male	CPL-Operation	20/12/2019	Fit
90	JAYDEV DAS	33Y	Male	CPL-Operation	20/12/2019	Fit
91	SANTOSH SINGH	38Y	Male	Quality Assurance	20/12/2019	Fit
92	SANTOSH KR.SAHU	42Y	Male	SRL	20/12/2019	Fit
93	RAJEEV KHARE	44Y	Male	Quality Assurance	20/12/2019	Fit
94	DHAMMANAND HIREKAN	36Y	Male	Elect-Maint	20/12/2019	Fit
95	RAVINDRA YADAV	37Y	Male	CPL-Operation	20/12/2019	Fit
96	PARTHAJIT MISHRA	26Y	Male	Elect-Maint	20/12/2019	Fit
97	JANG BAHADUR	49Y	Male	Mech-Maint.	20/12/2019	Fit
98	ASHISH MISHRA	51Y	Male	Quality Assurance	20/12/2019	Fit
99	SANJAY KR.YADAV	42Y	Male	SRL	20/12/2019	Fit
100	KRISHNA YADAV	36Y	Male	Mech-Maint.	20/12/2019	Fit
101	TAHIR HUSSAIN	29Y	Male	CPL-Operation	20/12/2019	Fit
102	GOURAV AGARWAL	37Y	Male	CPL-Operation	20/12/2019	Fit
103	PREMANGSHU SAHA	40Y	Male	Mech-Maint.	20/12/2019	Fit
104	KAUSHIK GHOSH	38Y	Male	Elect-Maint	20/12/2019	Fit
105	MS.ADYA	25Y	Male	Elect-Maint	20/12/2019	Fit
106	BHARAT TIWARI	42Y	Male	PPC	20/12/2019	Fit
107	PRIYANKA KUMARI	25Y	Male	Elect-Maint	20/12/2019	Fit
108	PUJA KUMARI	24Y	Male	SCM	20/12/2019	Fit
109	BIPIN KUMAR	41Y	Male	Quality Assurance	20/12/2019	Fit
110	ARUP DUTTA	42Y	Male	IT System	20/12/2019	Fit
111	RAJESHREE BHOWNICK	34Y	Male	HR	20/12/2019	Fit
112	HEMANT	34Y	Male	MCL-Operation	20/12/2019	Fit
113	ADITI SHARMA	32Y	Male	HR	20/12/2019	Fit
114	CHANDAN KR.SINHA	34Y	Male	Quality Assurance	20/12/2019	Fit
115	SATYENDRA MISHRA	28Y	Male	MCL-Operation	20/12/2019	Fit
116	RAM KHILWAN YADAV	44Y	Male	MCL-Operation	20/12/2019	Fit
117	ATANU DALUI	39Y	Male	Mech-Maint.	20/12/2019	Fit
118	CHETAN BHAMRE	36Y	Male	Mech-Maint.	20/12/2019	Fit
119	RAM AWADH CHAUHAN	43Y	Male	Mech-Maint.	20/12/2019	Fit
120	RAMESH TUDU	30Y	Male	CPL-Operation	20/12/2019	Fit
121	DHIRENDRA SINGH	38Y	Male	CPL-Operation	20/12/2019	Fit
122	DIGAMBAR SONGADE	40Y	Male	Elect-Maint	20/12/2019	Fit

## Medical Report Details of Employees

Sr.No	Name of Employee	Age	Sex	Department	Date of medical Examination.	Status
123	VIKASH KUMAR MAHATO	29Y	Male	MCL-Operation	20/12/2019	Fit
124	GAURAV JHA	36Y	Male	MCL-Operation	20/12/2019	Fit
125	KARTIK SINGH	49Y	Male	SCM	20/12/2019	Fit
126	AMIT SINHA	32Y	Male	MCL-Operation	20/12/2019	Fit
127	SACHIN LOKHARE	40Y	Male	Logistics	20/12/2019	Fit
128	PRAVIN KUMAR RAI	39Y	Male	Utility	20/12/2019	Fit
129	SANJAI KR.SINGH	36Y	Male	Quality Assurance	20/12/2019	Fit
130	HUSSAINULOLA QUADVI	38Y	Male	Electr.Maint.	20/12/2019	Fit
131	AMIT RANJAN	40Y	Male	MCL-Operation	20/12/2019	Fit
132	M. RAMESH KUMAR	41Y	Male	Logistics	20/12/2019	Fit
133	K.RAJ SHEKHAR RAO	37Y	Male	MCL-Operation	20/12/2019	Fit
134	SUNNY KUMAR	30Y	Male	Logistics	20/12/2019	Fit
135	ANIL KR. CHOUDHARY	32Y	Male	CPL-Operation	20/12/2019	Fit
136	SAGAR MUKHERJEE	42Y	Male	CPL-Operation	20/12/2019	Fit
137	NAHAR SINGH	31Y	Male	CPL-Operation	20/12/2019	Fit
138	PRAFULLA	36Y	Male	MCL-Operation	20/12/2019	Fit
139	J.P.SHARMA	36Y	Male	Quality Assurance	20/12/2019	Fit
140	MALKIT SINGH	29Y	Male	MCL-Operation	20/12/2019	Fit
141	N.K.PRASAD	52Y	Male	Mech.Maint.	20/12/2019	Fit
142	ARVIND KR.MISHRA	51Y	Male	Mech.Maint.	20/12/2019	Fit
143	BARUN KR.JHA	35Y	Male	IT System	20/12/2019	Fit
144	MAHENDRA DHAMAL	33Y	Male	Quality Assurance	20/12/2019	Fit
145	PRADEEP KR.PANDA	45Y	Male	MCL-Operation	20/12/2019	Fit
146	PRASHANT SRIVASTAVA	33Y	Male	Electr.Maint.	20/12/2019	Fit
147	SOURAV SEN	39Y	Male	Utility	20/12/2019	Fit
148	DR.ASHISH BHADURI	55Y	Male	Chief-Operation	20/12/2019	Fit
149	RAJESH MAHESHWARI	56Y	Male	Quality Assurance	20/12/2019	Fit
150	SUMAN BISWAS	34Y	Male	Electr.Maint.	20/12/2019	Fit
151	SUJAY KUMAR	51Y	Male	Mech.Maint.	20/12/2019	Fit
152	PUSHPENDRA SINGH	36Y	Male	CPL-Operation	20/12/2019	Fit
153	ARBIND KR.SINGH	46Y	Male	SCM	21/12/2019	Fit
154	ASHISH RANJAN	34Y	Male	CPL-Operation	21/12/2019	Fit
155	DHIRAJ MUKHERJEE	38Y	Male	Logistics	21/12/2019	Fit
156	ABHISHEK SINGH	35Y	Male	IT & Automation	21/12/2019	Fit
157	VINAY VERMA	32Y	Male	Electr.Maint.	21/12/2019	Fit
158	SANJIV KUMAR	39Y	Male	Quality Assurance	21/12/2019	Fit
159	KEDAR MISTRI	47Y	Male	Utility	21/12/2019	Fit
160	AMOL RAWTE	33Y	Male	MCL-Operation	21/12/2019	Fit
161	SRISHTIDHAR MAHATO	31Y	Male	Electr.Maint.	21/12/2019	Fit
162	AJAY KUMAR	31Y	Male	Quality Assurance	21/12/2019	Fit
163	KISLAY KISHORE	32Y	Male	CPL-Operation	21/12/2019	Fit
164	BABITA HANSDA	21Y	Female	PPC	21/12/2019	Fit

## Medical Report Details of Employees

Sr.No	Name of Employee	Age	Sex	Department	Date of medical Examination.	Status
165	MD.IQBAL	38Y	Male	Logistics	21/12/2019	Fit
166	SHAIENDRA SINGH	38Y	Male	Quality Assurance	21/12/2019	Fit
167	KARAMVIR SINGH	41Y	Male	MCL-Operation	21/12/2019	Fit
168	SUSANTA MOHANTY	33Y	Male	MCL-Operation	21/12/2019	Fit
169	KISHAN LAL SAINI	34Y	Male	MCL-Operation	21/12/2019	Fit
170	VIKASH KUMAR	34Y	Male	MCL-Operation	21/12/2019	Fit
171	SANJAY KR.KHAN	49Y	Male	Logistics	21/12/2019	Fit
172	CHANDAN SINGH	37Y	Male	IT & Automation	21/12/2019	Fit
173	AJAY KR.PASWAN	44Y	Male	Quality Assurance	21/12/2019	Fit
174	ASHISH KUMAR	31Y	Male	Quality Assurance	21/12/2019	Fit
175	VED PRAKASH	36Y	Male	Quality Assurance	21/12/2019	Fit
176	K.G.SONI	42Y	Male	Quality Assurance	21/12/2019	Fit
177	ANURANJAN	37Y	Male	Construction	21/12/2019	Fit
178	SAMRESH KUMAR	39Y	Male	HSE	21/12/2019	Fit
179	RAKESH ROSHAN	42Y	Male	Finance	21/12/2019	Fit
180	A.K.PANDEY	43Y	Male	Mech-Maint.	21/12/2019	Fit
181	BIBHUTI BHUSHAN PATRI	34Y	Male	Elect-Maint.	21/12/2019	Fit
182	SUDIP DEY	41Y	Male	Finance	21/12/2019	Fit
183	SOURABH KHANDELWAL	35Y	Male	MCL-Operation	21/12/2019	Fit
184	MR.ABHAY KUMAR	27Y	Male	MCL-Operation	21/12/2019	Fit
185	MR.SANTOSH KUMAR MISHRA	38Y	Male	Logistics	21/12/2019	Fit
186	MR.JAY PRAKASH YADAV	38Y	Male	Mech-Maint.	21/12/2019	Fit
187	MR.NARAYAN LAL BOHRA	39Y	Male	MCL-Operation	21/12/2019	Fit
188	MR.DHEERENDRA SINGH	40Y	Male	Elect-Maint.	21/12/2019	Fit
189	MR.RANJAN	34Y	Male	MCL-Operation	21/12/2019	Fit
190	MR.FIRDOS ALAM KHAN	39Y	Male	HSE	21/12/2019	Fit
191	MR.JOHCY METHEW	50Y	Male	CPL-Operation	21/12/2019	Fit
192	MR.RAHUL ANAND	40Y	Male	Elect-Maint.	21/12/2019	Fit
193	MR.SAROJ BISOI	40Y	Male	IT System	21/12/2019	Fit
194	MR.MANOJ KUMAR PATHAK	41Y	Male	IT System	21/12/2019	Fit
195	MRS.ARTI RANJAN	39Y	Male	IT System	21/12/2019	Fit
196	MR.SHASHIKANT VERMA	30Y	Male	Elect-Maint.	21/12/2019	Fit
197	MR.NIRANJAN ROUT	46Y	Male	Busin. Excellence	21/12/2019	Fit
198	MR.PIYUSH KUMAR	50Y	Male	Finance	21/12/2019	Fit
199	MR.INDRANIL BISWAS	50Y	Male	MCL-Operation	21/12/2019	Fit
200	MR.SUMAN SEAL	30Y	Male	MCL-Operation	21/12/2019	Fit
201	MR.SOMNATH BANRA	33Y	Male	Elect-Maint.	21/12/2019	Fit
202	MR.PUSHPENDRA SINGH	31Y	Male	Elect-Maint.	21/12/2019	Fit
203	MR.SANJEEVENDRA BHARDWAJ	40Y	Male	Elect-Maint.	21/12/2019	Fit
204	MR.DIPAK BISWAS	44Y	Male	Mech-Maint.	21/12/2019	Fit

Medical Examination Report of Contractor Employee Involved in crane Operation and forklift operation							
Sr No	Date of Medical Examination	Name	SEX	Age	Wearing Glass or not	Eye Sight	Remarks of Doctor
1	25-Sep-19	Sitaram Yadav Forklift Operator	Male	31	No	Normal	Fit For Duty
2	03-Mar-20	Subash Lohar Forklift Operator	Male	25	No	Normal	Fit For Duty
3	12-Sep-19	Tarsen Singh Forklift Operator	Male	54	No	Normal	Fit For Duty
4	15-Oct-19	Suresh Murmu Forklift Operator	Male	26	No	Normal	Fit For Duty
5	13-Nov-19	Afaque Osmani	Male	40	No	Normal	Fit For Duty
6	13-Nov-19	Manish Kumar Singh	Male	34	No	Normal	Fit For Duty
7	13-Nov-19	Satyendra Kumar Upadhyay	Male	41	Yes	Normal	Fit For Duty
8	13-Nov-19	Ravi Shankar Upadhyaya	Male	34	No	Normal	Fit For Duty
9	13-Nov-19	Mukesh Kumar Mishra	Male	40	No	Normal	Fit For Duty
10	13-Nov-19	Vikash Kumar	Male	32	No	Normal	Fit For Duty
11	13-Nov-19	Anup Kumar Dey	Male	30	No	Normal	Fit For Duty
12	14-Nov-19	Nirmal Prasad Singh	Male	31	No	Normal	Fit For Duty
13	14-Nov-19	Radhe Oraon	Male	48	Yes	Normal	Fit For Duty
14	14-Nov-19	Shadab Alam	Male	38	No	Normal	Fit For Duty
15	14-Nov-19	Shyamal Ghosh	Male	53	Yes	Normal	Fit For Duty
16	14-Nov-19	Bijay Pandey	Male	28	No	Normal	Fit For Duty
17	14-Nov-19	Jagat Kumar Singh	Male	42	No	Normal	Fit For Duty

## Medical report of employees &amp; contractor employee of hazardous activity

Sr.No	Name of Employee	Age	Sex	Department	Date of Examination	Status
1	Mr.T.Kishore Kumar	31 yrs	Male	M/s Vouch System	05-09-2019,	Fit
2	Mr.Jay Ram Singh	35 yrs	Male	M/s Vouch System	05-09-2019,	Fit
3	Mr.Vikash Kumar Sharma	26 yrs	Male	M/s Vouch System	05-09-2019,	Fit
4	Mr.Hopon Soren	29 yrs	Male	M/s Vouch System	05-09-2019,	Fit
5	Mr.Karfu Chandra Poddar	30 yrs	Male	M/s Vouch System	05-09-2019,	Fit
6	Mr.Azad Soren	26 yrs	Male	M/s M Kumar & Co	05-09-2019,	Fit
7	Mr.Sonu Kumar Dubey	33 yrs	Male	M/s M Kumar & Co	05-09-2019,	Fit
8	Mr.Hiralal Yadav	27 yrs	Male	M/s M Kumar & Co	05-09-2019,	Fit
9	Mr.Harish Ch Tanti	40 yrs	Male	M/s M Kumar & Co	05-09-2019,	Fit
10	Mr.Prakash Vishwakarma	39 yrs	Male	CCL-Opration	05-09-2019,	Fit
11	Mr.Amit Mate	33 yrs	Male	CCL-Opration	05-09-2019,	Fit
12	Mr.Gora Sundi	30 yrs	Male	M/s M Kumar & Co	05-09-2019,	Fit
13	Mr.Ravi Upadhyay	30 yrs	Male	CCL-Opration	05-09-2019,	Fit
14	Mr.Anil Jha	34 yrs	Male	M/s M Kumar & Co	05-09-2019,	Fit
15	Mr.Pravesh Singh	40 yrs	Male	M/s Vouch System	05-09-2019,	Fit
16	Mr.Shankar Nag	49 yrs	Male	M/s Vouch System	05-09-2019,	Fit
17	Mr.Basudev Mondal	29 yrs	Male	M/s Vouch System	05-09-2019,	Fit
18	Mr.Sourav Aditya	29 yrs	Male	M/s Vouch System	05-09-2019,	Fit
19	Mr.Shashidhar Bhumij	30 yrs	Male	M/s Vouch System	05-09-2019,	Fit
20	Mr.Vivek Kumar	27 yrs	Male	M/s Vouch System	05-09-2019,	Fit
21	Mr.Nihar Ranjan Mohapatra	41 yrs	Male	CCL-Opration	05-09-2019,	Fit
22	Mr.Shashi Bhusan Singh	40 yrs	Male	M/s M Kumar & Co	05-09-2019,	Fit
23	Mr.Prabhat Kumar Yadav	30 yrs	Male	M/s M Kumar & Co	06-09-2019,	Fit
24	Mr.Somnath Sen	22 yrs	Male	M/s M Kumar & Co	06-09-2019,	Fit
25	Mr.Rajesh Sahu	30 yrs	Male	M/s M Kumar & Co	06-09-2019,	Fit
26	Mr.Ajit Singh	30 yrs	Male	M/s M Kumar & Co	06-09-2019,	Fit
27	Mr.Raju Kumar Saw	24 yrs	Male	M/s M Kumar & Co	06-09-2019,	Fit
28	Mr.Ashish Ranjan	34 yrs	Male	CCL-Opration	06-09-2019,	Fit
29	Mr.Binoy Sarkar	29 yrs	Male	M/s M Kumar & Co	06-09-2019,	Fit
30	Mr.Tikechand Deep	34 yrs	Male	CCL-Opration	06-09-2019,	Fit
31	Mr.Rangia Jamuda	37 yrs	Male	CCL-Opration	06-09-2019,	Fit
32	Mr.Jay Dev Das	32 yrs	Male	CCL-Opration	06-09-2019,	Fit
33	Mr.Manoj Kumar Ojha	40 yrs	Male	M/s M Kumar & Co	06-09-2019,	Fit
34	Mr.Ramesh Tudu	30 yrs	Male	CCL-Opration	07-09-2019,	Fit
35	Mr.Shashikant Prasad Singh	30 yrs	Male	M/s Shambhavi	21-09-2019,	Fit
36	Mr.Atanu Dalui	39 yrs	Male	Mech.Maintenance	21-09-2019,	Fit
37	Mr.Chetan Shantaram Bhamare	36 yrs	Male	Mech.Maintenance	21-09-2019,	Fit
38	Ms.Reya Hembrom	19 yrs	Female	Utility	23-09-2019,	Fit
39	Mr.Anil Kumar Yadav	36 yrs	Male	Utility	23-09-2019,	Fit
40	Mr.Hareram Singh	42 yrs	Male	Utility	23-09-2019,	Fit
41	Mr.Akhileshwar Kumar Pandey	43 yrs	Male	Mech.Maintenance	23-09-2019,	Fit

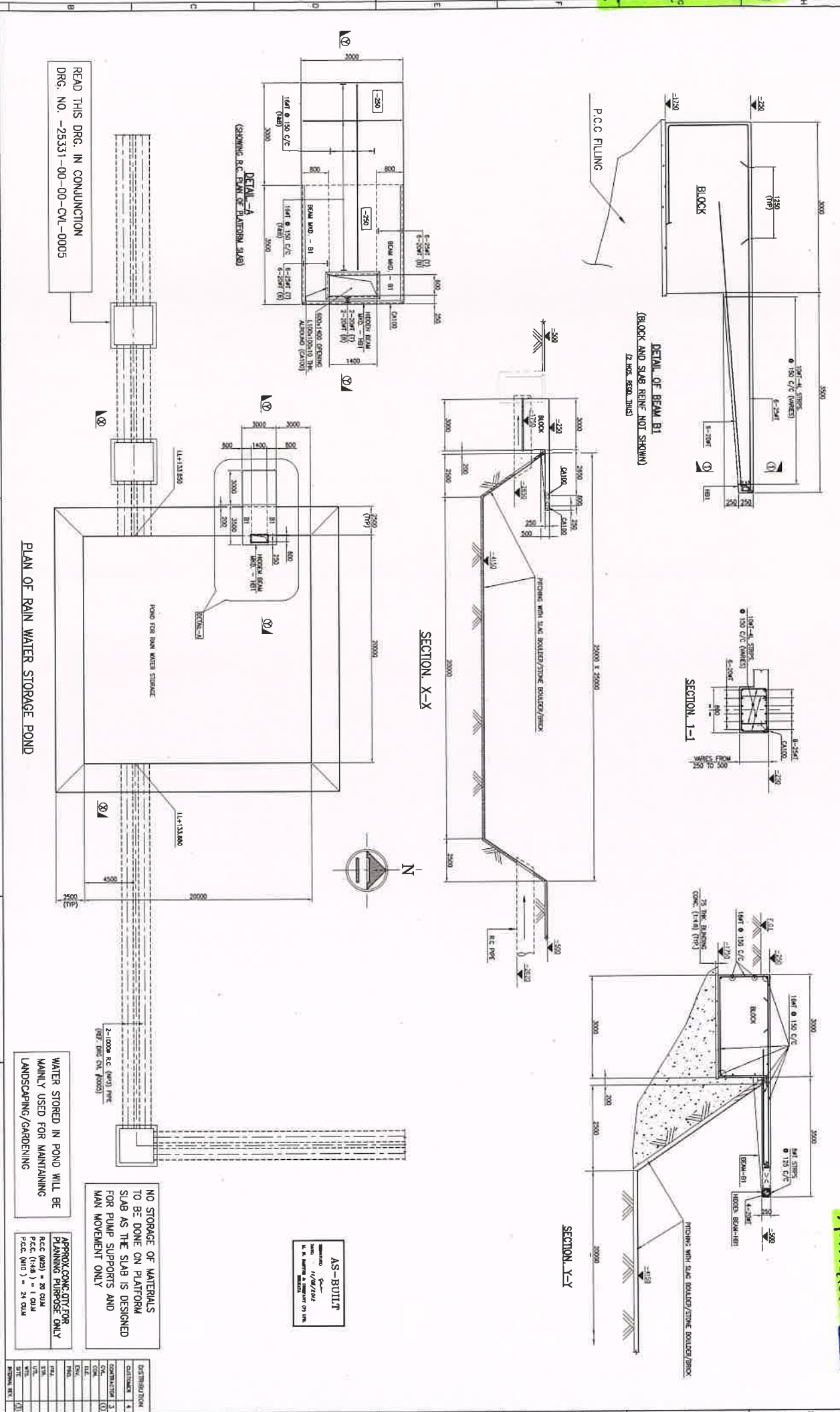
## Medical report of employees &amp; contractor employee of hazardous activity

Sr.No	Name of Employee	Age	Sex	Department	Date of Examination	Status
42	Mr.Muzahid Ali Khan	34 yrs	Male	Mech.Maintenance	23-09-2019,	Fit
43	Mr.Amit	29 yrs	Male	M/s Shambhavi	23-09-2019,	Fit
44	Mr.Amit Kumar Jha	29 yrs	Male	M/s Shambhavi	23-09-2019,	Fit
45	Mr.Pawan Kumar Singh	32 yrs	Male	CCL-Opration	23-09-2019,	Fit
46	Mr.Ravindra Hiranman Patil	44 yrs	Male	Mech.Maintenance	23-09-2019,	Fit
47	Mr.Manjeet Singh	38 yrs	Male	CCL-Opration	23-09-2019,	Fit
48	Mr.Samudra Bhattacharjee	25 yrs	Male	Mech.Maintenance	23-09-2019,	Fit
49	Mr.Saroj Dubey	37 yrs	Male	M/s Shambhavi	24-09-2019,	Fit
50	Mr.Anil Mukhi	38 yrs	Male	M/s B.V.G	24-09-2019,	Fit
51	Mr.Mukesh Kr Ray	33 yrs	Male	M/s Shambhavi	24-09-2019,	Fit
52	Mr.Karun Mukhi	38 yrs	Male	M/s B.V.G	24-09-2019,	Fit
53	Mr.Amit Kumar Yadav	28 yrs	Male	Utility	24-09-2019,	Fit
54	Mr.Dipak Biswas	44 yrs	Male	CCL-Opration	24-09-2019,	Fit
55	Mr.Mahabir Kumar Sharma	34 yrs	Male	M/s B.V.G	24-09-2019,	Fit
56	Mr.Abhijit Kumar	31 yrs	Male	Utility	24-09-2019,	Fit
57	Mr.Ram Awadh Chauhan	43 yrs	Male	Mech.Maintenance	24-09-2019,	Fit
58	Mr.Mannu Kumar Soni	29 yrs	Male	M/s B.V.G	24-09-2019,	Fit
59	Mr.Purana Chandra Patar	25 yrs	Male	M/s B.V.G	24-09-2019,	Fit
60	Mr.Avishek Kr Srivastava	32 yrs	Male	Mech.Maintenance	24-09-2019,	Fit
61	Mr.Jeevan D. Wahurwagh	37 yrs	Male	Mech.Maintenance	24-09-2019,	Fit
62	Mr.Laxmikant Nandankar	38 yrs	Male	Mech.Maintenance	24-09-2019,	Fit
63	Mr.Mrinal Karmakar	30 yrs	Male	M/s Shambhavi	25-09-2019,	Fit
64	Mr.Ravi Kant	34 yrs	Male	CCL-Opration	25-09-2019,	Fit
65	Mr.Tahir Hussain	30 yrs	Male	CCL-Opration	25-09-2019,	Fit
66	Mr.Dheerendra Singh Baghel	39 yrs	Male	CCL-Opration	25-09-2019,	Fit
67	Mrs.Gauri Gope	28 yrs	Female	M/s B.V.G	26-09-2019,	Fit
68	Mrs.Sumitra Devgam	26 yrs	Female	M/s B.V.G	26-09-2019,	Fit
69	Mr.Bablu Kumar	23 yrs	Male	M/s M Kumar & Co	26-09-2019,	Fit
70	Mr.Sikandar Prasad Gupta	30 yrs	Male	M/s M Kumar & Co	26-09-2019,	Fit
71	Mr.Basu Das	26 yrs	Male	M/s M Kumar & Co	26-09-2019,	Fit
72	Mr.Bablu Bauri	45 yrs	Male	M/s B.V.G	26-09-2019,	Fit
73	Mr.Laxman Sahu	25 yrs	Male	M/s B.V.G	26-09-2019,	Fit
74	Mr.Ramesh Kr Singh	36 yrs	Male	M/s M Kumar & Co	26-09-2019,	Fit
75	Mr.Duryodhan Gour	37 yrs	Male	M/s M Kumar & Co	26-09-2019,	Fit
76	Mr.Samresh Kumar	39 yrs	Male	Health safety & Env.	26-09-2019,	Fit
77	Mr.Sagar Mukherjee	43 yrs	Male	CCL-Opration	27-09-2019,	Fit
78	Mr.Aman Kumar Jha	20 yrs	Male	M/s B.V.G	27-09-2019,	Fit
79	Mrs.Damayanti Munda	32 yrs	Female	M/s B.V.G	27-09-2019,	Fit
80	Mrs.Kavita Devi	47 yrs	Female	M/s B.V.G	27-09-2019,	Fit

## Medical report of employees &amp; contractor employee of hazardous activity

Sr.No	Name of Employee	Age	Sex	Department	Date of Examination	Status
81	Mr.Rudra Kr Sahu	31 yrs	Male	M/s M Kumar & Co	27-09-2019,	Fit
82	Mr.Alok Kumar	29 yrs	Male	M/s M Kumar & Co	27-09-2019,	Fit
83	Mr.Md Ezazul Haque	32 yrs	Male	CCL-Operation	28-09-2019,	Fit
84	Mr.Yogesh Sharma	32 yrs	Male	MCL-Operation	28-09-2019,	Fit
85	Mr.Ramkhilawan Yadav	44 yrs	Male	MCL-Operation	28-09-2019,	Fit
86	Mr.Satyendra Mishra	28 yrs	Male	MCL-Operation	28-09-2019,	Fit
87	Mr.Vikash Rajak	28 yrs	Male	M/s M Kumar & Co	28-09-2019,	Fit
88	Mr.Sanjay Kunkar	28 yrs	Male	M/s M Kumar & Co	28-09-2019,	Fit
89	Mr.Rahul Paul	21 yrs	Male	M/s M Kumar & Co	28-09-2019,	Fit
90	Mr.Narayan Lal Bohra	40 yrs	Male	MCL-Operation	28-09-2019,	Fit
91	Mr.Ashok Gour	41 yrs	Male	M/s M Kumar & Co	28-09-2019,	Fit
92	Mr. Ranjit Kumar	26 yrs	Male	M/s M Kumar & Co	10-09-2019,	Fit





READ THIS DRG. IN CONJUNCTION  
DRG. NO. -25331-00-00-CV-0005

PLAN OF RAIN WATER STORAGE POND

SECTION X-X

SECTION 1-1

SECTION Y-Y

- NOTES
1. ALL DIMENSIONS ARE IN MILLIMETERS AND CO-ORDINATES IN METRIC UNITS UNLESS OTHERWISE STATED.
  2. GRADE OF F.C.C. SHALL BE 1%.
  3. REINFORCEMENT BARS DESIGNATED BY 'VF' INDICATE HIGH YIELD STRENGTH, HIGH DUCTILE, DEFORMED BARS CONFORMING TO IS: 1786-1985.
  4. UP AND DOWN LENGTH OF BARS SHALL BE AT LEAST 40X DIA. OF BARS.
  5. ALL BARS SHALL BE PROVIDED WITH 10MM BENDS AT 90 DEGREE.
  6. NET SURF BENDING COEFFICIENT OF 50% AT FOUNDATION LEVEL, 12 (7/50).

WATER STORED IN POND WILL BE  
MAINLY USED FOR MAINTAINING  
LANDSCAPING/GARDENING

NO STORAGE OF MATERIALS  
TO BE DONE ON PLATFORM  
SLAB AS THE SLAB IS DESIGNED  
FOR PUMP SUPPORTS AND  
MAN MOVEMENT ONLY.

AS-BUILT  
DATE: 11/07/2012  
BY: M. N. DASTUR  
FOR: TATA BLUESCOPE STEEL LTD.

APPROX CONG. QTY FOR  
PLANNING PURPOSE ONLY  
R.C. (W2) = 28 CU.M  
R.C. (W1) = 24 CU.M  
P.C.C. (W1) = 24 CU.M

DISTRIBUTION	ESTIMATE	NO.	DATE	BY	REVISION
1	1	1	11/07/2012	M. N. DASTUR	
2	2	2	11/07/2012	M. N. DASTUR	
3	3	3	11/07/2012	M. N. DASTUR	
4	4	4	11/07/2012	M. N. DASTUR	
5	5	5	11/07/2012	M. N. DASTUR	
6	6	6	11/07/2012	M. N. DASTUR	
7	7	7	11/07/2012	M. N. DASTUR	
8	8	8	11/07/2012	M. N. DASTUR	
9	9	9	11/07/2012	M. N. DASTUR	
10	10	10	11/07/2012	M. N. DASTUR	
11	11	11	11/07/2012	M. N. DASTUR	
12	12	12	11/07/2012	M. N. DASTUR	
13	13	13	11/07/2012	M. N. DASTUR	
14	14	14	11/07/2012	M. N. DASTUR	
15	15	15	11/07/2012	M. N. DASTUR	
16	16	16	11/07/2012	M. N. DASTUR	
17	17	17	11/07/2012	M. N. DASTUR	
18	18	18	11/07/2012	M. N. DASTUR	
19	19	19	11/07/2012	M. N. DASTUR	
20	20	20	11/07/2012	M. N. DASTUR	

APPROVAL

CONSULTING ENGINEERS  
**M. N. DASTUR & COMPANY (P) LTD.** KODAKA

TATA BLUESCOPE STEEL LTD.  
BANK ASHI POND, JAMSHEDPUR

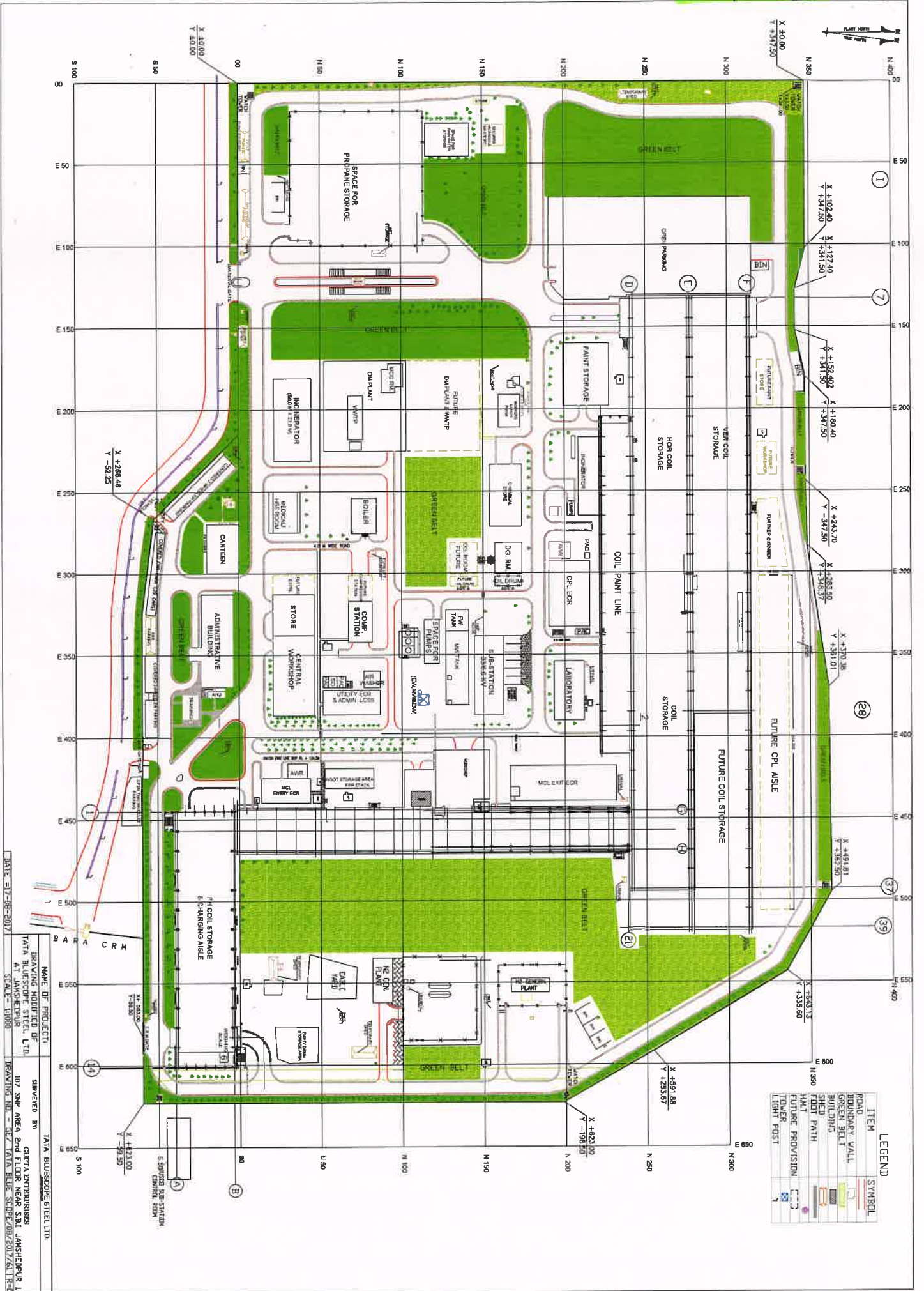
COATED STEEL COMPLEX (PH-I)  
RAIN WATER HARVESTING  
DETAIL OF POND AND R.C PLATFORM

DATE: 11/07/2012  
SCALE: 1:50  
BY: M. N. DASTUR  
CHECKED: M. N. DASTUR  
APPROVED: M. N. DASTUR

APPROVED FOR CONSTRUCTION  
DATE: 11/07/2012  
BY: M. N. DASTUR  
CHECKED: M. N. DASTUR  
APPROVED: M. N. DASTUR

NO.	DATE	ZONE	REMARKS	BY	APP.	DRG. NO.	REFERENCE DRAWINGS
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

# Annexure - IX



NAME OF PROJECT: TATA BLUESCOPE STEEL LTD.  
 DRAWING MODIFIED BY: GUPTA ENTERPRISES  
 TATA BLUESCOPE STEEL LTD. AT JAMSHEDPUR  
 SCALE: 1:1000  
 DATE: 27-08-2017  
 DRAWING NO: 42/TATA BLUE SCOPE/08/2017/611/REV

SUPERVED BY: GUPTA ENTERPRISES  
 107 SNP AREA 2nd FLOOR NEAR SBI  
 JAMSHEDPUR 1

GREEN BELT AND PLATATION WORK PROGRESS REPORT				
		China Palm	25	1000
		Golden Doranda	500	20000
		Ficus King Bush	4	300
		Lavendra (Ground coveres)	50	3100
		cuphea	25	1875
		ficus panda	1	75
		Bismarika nobolis	3	225
		Ficus Benjamina	50	2000
		Bottle Palm	18	1350
		<b>GRAND TOTAL</b>	<b>1977</b>	<b>358951</b>
Total Number of Plants, Ground coverers and Shrubs planted during January to March 2011 was 2027 and amount expense was Rs. 362051				
April to 15 June 2011	Total no of working days 47	Gulmohar	46	3425
	Total no of labours 16	Champa	77	2000
		Bottle Palm	50	975
		Silver Oke	13	975
		LangesttrmiaFlosergia	13	975
		Champa	75	1900
		Elistonia	61	3782
		Ficus Benjamina	70	2400
		Phonick Pan	61	2800
		Cassiafis Tula	13	4575
		Cledendron Inerme	100	806
		Elentina Red	100	4000
		Golden Bamboo	10	6200
		Murraya paniculata	250	6200
		<b>Grand Total</b>	<b>939</b>	<b>41013</b>
		<b>Lawn</b>	<b>Area in Square Meter</b>	
		Ground Coverers	65	10000
		Grass Koren carpet	3116	373968
		Earth and Good Manure		302000
		<b>Total</b>		<b>685968</b>
Total No of Plants and Shrubs Planted during period April 2011 to 15th June 2011 was 939 and expence amount was Rs. 41013. Total area of lawn in Sq. mtr was 3181 and expence amount was Rs383968 Cost of good earth and manure was Rs. 302000.Total Amount of expense was Rs. 726981				
July 2011 to Sept 2011		Fichus Benjamin	36	1440
		Bismarck & Shrubs	30 & 383	1200 & 20956
		Ground cover	262	4800
		Lavenders ,	32	3320
		Golden Doranda	783	1570
		Plumbaria Alba	5	240
		Calendar & Champa	30 & 77	375 & 2000
		Alistonia Scholaris	20	1500
		Ficus Benjamina	70	2400
	Total no of working days 42	Silver oak	15	1125
	Total no of labours 24	Gulmohar	46	3425
		Golden Bamboo	10	6200
		Murraya paniculata	250	6200
		<b>Total</b>	<b>2049</b>	<b>56751</b>
Total No of Plants, Shrubs and Ground coverers planted during October'2010 to Sept 30 2011 is 6615 and amount expend is Rs. 496566. Total area of Lawn develop in Sq. Mtr is 22026 and amount expend is Rs. 1564145 Cost of good earth and manure is Rs. 912000				
Cost of development of Green Belt in TATA BLUESCOPE STEEL, Bara Plant is Rs. 2972711which was paid to authorized vendors of company				
From October to December 2011	Total no of working days 75, Total no of labours 7			Cost of maintaining lawn and plantation was Rs 290000 .

GREEN BELT AND PLATATION WORK PROGRESS REPORT				
		China Palm	25	1000
		Golden Doranda	500	20000
		Ficus King Bush	4	300
		Lavendra (Ground coveres)	50	3100
		cuphea	25	1875
		ficus panda	1	75
		Bismarika nobolis	3	225
		Ficus Benjamina	50	2000
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		<b>GRAND TOTAL</b>	<b>1977</b>	<b>358951</b>
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	Total no of labours 16	Champa	77	2000
		Bottle Palm	50	975
		Silver Oke	13	975
		LangesttrmiaFlosergia	13	975
		Champa	75	1900
		Elistonia	61	3782
		Ficus Benjamina	70	2400
		Phonick Pan	61	2800
		Cassiafis Tula	13	4575
		Cledendron Inerme	100	806
		Elentina Red	100	4000
		Golden Bamboo	10	6200
		Murraya paniculata	250	6200
		<b>Grand Total</b>	<b>939</b>	<b>41013</b>
		<b>Lawn</b>	<b>Area in Square Meter</b>	
		Ground Coverers	65	10000
		Grass Koren carpet	3116	373968
		Earth and Good Manure		302000
		<b>Total</b>		<b>685968</b>
Total No of Plants and Shrubs Planted during period April 2011 to 15th June 2011 was 939 and expence amount was Rs. 41013. Total area of lawn in Sq. mtr was 3181 and expence amount was Rs383968 Cost of good earth and manure was Rs. 302000.Total Amount of expence was Rs. 726981				
July 2011 to Sept 2011		Fichus Benjamin	36	1440
		Bismarck & Shrubs	30 & 383	1200 & 20956
		Ground cover	262	4800
		Lavenders	32	3320
		Golden Doranda	783	1570
		Plumbaria Alba	5	240
		Calendar & Champa	30 & 77	375 & 2000
		Alistonia Scholaris	20	1500
		Ficus Benjamina	70	2400
	Total no of working days 42	Silver oak	15	1125
	Total no of labours 24	Gulmohar	46	3425
		Golden Bamboo	10	6200
		Murraya paniculata	250	6200
		<b>Total</b>	<b>2049</b>	<b>56751</b>
Total No of Plants, Shrubs and Ground coverers planted during October'2010 to Sept 30 2011 is 6615 and amount expend is Rs. 496566. Total area of Lawn develop in Sq. Mtr is 22026 and amount expend is Rs. 1564145 Cost of good earth and manure is Rs. 912000				
Cost of development of Green Belt in TATA BLUESCOPE STEEL, Bara Plant is Rs. 2972711which was paid to authorized vendors of company				
From October to December 2011	Total no of working days 75, Total no of labours 7			Cost of maintaining lawn and plantation was Rs 290000 .

GREEN BELT AND PLATATION WORK PROGRESS REPORT		
From January12 to March12	Total no of working days 75,Total no of labours 9	Cost of maintaining lawn and plantation was Rs 302600
Total Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 592600 and it was paid to authorized vendors of company. During period from Oct-2011 to March-2012.		
From April 12 to June 2012	Total no of working days 70 ,total no of labours 11	Cost of maintaining lawn and plantation wasRs 302600
from July 2012 to Sept 2012	Total no of working days 73 ,total no of labours 11	Cost of maintaining lawn and plantation wasRs 302600
Total Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 6052000 and it was paid to authorized vendors of company. During period from APRIL 2012 to Sept 2012.		
From Oct 12 to Dec 2012	Total no of working days 65 ,total no of labours 12	Cost of maintaining lawn and plantation wasRs 325843
from Jan 13 to Mar 13	Total no of working days 73 ,total no of labours 12	Cost of maintaining lawn and plantation wasRs 316854
Total Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 642699 and it was paid to authorized vendors of company. During period from Oct 2012 to Mar 2013.		
from April-13 to Sep-13	Total no of working days 154 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 479822
Total 235 plants and Shrubs Planted during period April 2013 to Sep-13,out of 235,135 Plants donated by forest department and total Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 478932 and it was paid to authorized vendors of company. During period from April to 2013 to Sep-2013.		
From Oct 13 to Dec 2013	Total no of working days 70 ,total no of labours 06	Cost of maintaining lawn and plantation was Rs 249325
From Jan 14 to Mar 14	Total no of working days 73 ,total no of labours 06	Cost of maintaining lawn and plantation was Rs 255295
Total 120 plants and shrubs planted during period Oct-13 to March-14 and total Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 504620,it was paid to authorized vendors of company. During period from Oct 2013 to Mar 2014.		
From April 14 to June 14	Total no of working days 72 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 262923
From July 14 to Sep 14	Total no of working days 73 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 262225
Total 70 plants and shrubs planted during period April-14 to Sep-14 and total Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 525148 and it was paid to authorized vendors of company,during period from April 14 to Sep 2014.		
From Oct 14 to Dec 14	Total no of working days 72 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 262174
From Jan 15 to Mar 15	Total no of working days 75 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 264672
From Apr'15 to June'15	Total no of working days 77 ,total no of labours 06	Cost of maintaining lawn and plantation was Rs 255034
From July'15 to Sep'15	Total no of working days 78 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 239259
Total 500 plants and shrubs planted during period April-15 to Sep-15 and total Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 494294,it was paid to authorized vendors of company,during period from April-15 to Sep-15		
From Oct'15 to Dec'15	Total no of working days 75 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 243516
From Jan'16 to Mar'16	Total no of working days 76 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 244116
Total 400 plants and shrubs planted during period Oct'15 to March'16,total cost of plantation was 38837 and Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 487632,it was paid to authorized vendors of company,during period from Oct'15 to March'16		
From April'16 to June'16	Total no of working days 76 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 194054
From July'16 to Sep'16	Total no of working days 76 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 194055

GREEN BELT AND PLATATION WORK PROGRESS REPORT		
Total 1667 plants and shrubs planted during period April'16 to Sep'16, total cost of plantation was 21055 and Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 388109 ,it was paid to authorized vendors of company,during period from April'16 to Sep'16		
From Oct'16 to Dec'16	Total no of working days 72 ,total no of labours 04	Cost of maintaining lawn and plantation was Rs 218960
From Jan'17 to March'17	Total no of working days 76 ,total no of labours 04	Cost of maintaining lawn and plantation was Rs 222640
Total 1397 plants and shrubs planted during period Oct'16 to March'17, total cost of plantation was 7565 and Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 441600 ,it was paid to authorized vendors of company,during period from Oct'16 to March'17.		
From April'17 to June'17	Total no of working days 77 ,total no of labours 04	Cost of maintaining lawn and plantation was Rs 187900
From July'17 to Sep'17	Total no of working days 76 ,total no of labours 04	Cost of maintaining lawn and plantation was Rs 187100
Total 231 plants and shrubs(Gumohar,Chatim & Forest tree) planted during period April'17 to Sep'17, total cost of plantation was 19300 and Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 375000 ,it was paid to authorized vendors of company,during period from April'17 to Sep'17.		
From Oct'17 to Dec'17	Total no of working days 75 ,total no of labours 04	Cost of maintaining lawn and plantation was Rs 186980
From Jan'18 to March'18	Total no of working days 76 ,total no of labours 04	Cost of maintaining lawn and plantation was Rs 188020
Total 240 plants and shrubs (Rose & Forest tree) planted during period Oct'17 to March'18, total cost of plantation was 14200 and Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 375000 ,it was paid to authorized vendors of company,during period from Oct'17 to March'18.		
From April'18 to June'18	Total no of working days 77 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 263145
From July'18 to Sep'18	Total no of working days 77 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 235050
Plants and shrubs (Forest tree & Fruit bear tree) planted from period April'18 to Sep'18, total cost of plantation was 17575 and Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 498195, it was paid to authorized vendors of company, during period from April'18 to Sep'18.		
From Oct'18 to Dec'18	Total no of working days 75 ,total no of labours 07	Cost of maintaining lawn and plantation was Rs 195898
From Jan'19 to March'19	Total no of working days 75 ,total no of labours 07	Cost of maintaining lawn and plantation was Rs 236359
Total Cost of Maintaining plants ,Shrubs ,Ground coverers and Lawn was RS 4,32,257, it was paid to authorized vendors of company, during period from Oct'18 to March'19.		
From April'19 to June'19	Total no of working days 77 ,total no of labours 07	Cost of maintaining lawn and plantation was Rs 236390
From July'19 to Sep'19	Total no of working days 78 ,total no of labours 07	Cost of maintaining lawn and plantation was Rs 259990
Total 150 Plants and shrubs planted, total cost of plants & shrubs was RS-1050 and total cost of maintaining plants ,shrubs ,ground coverers and lawn was RS 4,96,380, it was paid to authorized vendors of company during period of April'19 to Sep'19.		
From Oct'19 to Dec'19	Total no of working days 74 ,total no of labours 05	Cost of maintaining lawn and plantation was Rs 248191
From Jan'20 to March'20	Total no of working days 76 ,total no of labours 07	Cost of maintaining lawn and plantation was Rs 289194
Total cost of maintaining plants ,shrubs ,ground coverers and lawn was RS 5,37,385, it was paid to authorized vendors of company during period of Oct'19 to March'20.		
From April'20 to Jun'20	Total no of working days 71 ,total no of labours 07	Cost of maintaining lawn and plantation was Rs 294839
From July'20 to Sep'20	Total no of working days 76 ,total no of labours 07	Cost of maintaining lawn and plantation was Rs 309696
Total cost of maintaining plants ,shrubs ,ground coverers and lawn was RS 6,04,535, it was paid to authorized vendors of company during period of April'20 to Sep'20.		









# ENVIRONMENTAL LABORATORIES &

Annexure - X



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA,  
HATIA, RANCHI-834003 (JHARKHAND)  
Email: info@elespl.com, eles.ranchi@gmail.com  
GST NO:- 20AAECE9713D1Z4  
Phone/Fax No.: 0651-2290103

**ENGINEERING SERVICES PVT. LTD.**  
ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED  
NABL Accredited & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis

## TEST REPORT OF NOISE QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/423	Report Release Date	: 07.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR No	: TC88392000000005F		
<b>CUSTOMER DETAILS</b>		<b>SAMPLE DETAILS</b>	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AN/10
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Sampling Date	: 23.07.2020 to 24.07.2020
		Sample Received Date	: 27.07.2020
Plant Status	: Operational	Type of Sample	: Noise
		Sampling Procedure	: ELES/DOC/SMPL/03
		Sample Drawn By	: ELES Pvt. Ltd.
		Period of Analysis	: 27.07.2020 to 14.08.2020

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 31	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 78	4	Weather Condition	: Cloudy
5	NABL Group	: Atmospheric Pollution	6	Discipline	: Noise

### TEST REPORT

LOCATION	Units	TEST PROTOCOL	RESULTS			LIMITS
			L <sub>Max</sub>	L <sub>Min</sub>	L <sub>eq</sub>	L <sub>eq</sub>
Near Nitrogen Plant Area	dB(A)	IS 9989:1981,RA 2001	62.1	37.6	55	75 dB(A) Day Time & 70 dB(A) Night Time
Latitude:22°48'52.27"N						
Longitude :86°14'20.10"E						
Near Main Gate	dB(A)	IS 9989:1981,RA 2001	56.2	36.1	51	
Latitude:22°48'53.88"N						
Longitude :86°14'13.44"E						
SRL & Pack Line North Side	dB(A)	IS 9989:1981,RA 2001	51	34.2	45	
Latitude:22°49'00.83"N						
Longitude :86°14'4.71"E						

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

Authorised Signatory

**Dr. Deependra Kumar Sinha**  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager



CIN: U74999JH2018PTC011125

# ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT. LTD.

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Annexure-X

**ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED**  
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Environmental Pollution Monitoring & Analysis



## TEST REPORT OF NOISE QUALITY MONITORING

<b>Test Report No.</b> : ELES/RNC/2020/423		<b>Report Release Date</b> : 07.09.2020	
<b>LOA No.</b> : FY 20-21		<b>Work Order Date</b> : 20.07.2020	
<b>ULR No</b> : TC883920000000005F		<b>Schedule</b> : Half Yearly	
<b>CUSTOMER DETAILS</b>		<b>SAMPLE DETAILS</b>	
<b>Customer Name</b>	: Tata Blue Scope Steel Limited	<b>Sample Ref. No.</b>	: ELES/RNC/2020/AN/10
<b>Address</b>	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	<b>Sampling Date</b>	: 23.07.2020 to 24.07.2020
		<b>Sample Received Date</b>	: 27.07.2020
		<b>Type of Sample</b>	: Noise
		<b>Sampling Procedure</b>	: ELES/DOC/SMPL/03
		<b>Sample Drawn By</b>	: ELES Pvt. Ltd.
<b>Plant Status</b>	: Operational	<b>Period of Analysis</b>	: 27.07.2020 to 14.08.2020

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 31	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 78	4	Weather Condition	: Cloudy
5	NABL Group	: Atmospheric Pollution	6	Discipline	: Noise

### TEST REPORT

LOCATION	Units	TEST PROTOCOL	RESULTS			LIMITS
			L <sub>Max</sub>	L <sub>Min</sub>	L <sub>eq</sub>	L <sub>eq</sub>
Around Compressor House Latitude:22°48'53.10"N Longitude :86°14'12.22"E	dB(A)	IS 9989:1981,RA 2001	74.6	57.8	71	75 dB(A) Day Time & 70 dB(A) Night Time
Around Boiler House Latitude:22°48'56.60"N Longitude :86°14'9.60"E			73.6	60.3	70	
Near LPG Storage Area Latitude:22°48'49.67"N Longitude :86°14'3.81"E	dB(A)	IS 9989:1981,RA 2001	54.2	36.2	48	

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

*Dr. Deependra Kumar Sinha*

**Authorised Signatory**  
**Dr. Deependra Kumar Sinha**  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager



CIN: U74999JH2018PTC011125

# ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT. LTD.

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Annexure-X  
ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED

NABL Accredited & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis



## TEST REPORT OF NOISE QUALITY MONITORING

Test Report No.	: ELES/RNC/2020/423	Report Release Date	: 07.09.2020
LOA No.	: FY 20-21	Work Order Date	: 04.07.2020
ULR No	: TC883920000000005F		
<b>CUSTOMER DETAILS</b>		<b>SAMPLE DETAILS</b>	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/AN/10
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Sampling Date	: 23.07.2020 to 24.07.2020
		Sample Received Date	: 27.07.2020
		Type of Sample	: Noise
		Sampling Procedure	: ELES/DOC/SMPL/03
		Sample Drawn By	: ELES Pvt. Ltd.
Plant Status	: Operational	Period of Analysis	: 27.07.2020 to 14.08.2020

### METEOROLOGICAL INFORMATION

1	Average Temperature (°C)	: 31	2	Barometric Pressure (mmHg)	: 750
3	Relative Humidity (%)	: 78	4	Weather Condition	: Cloudy
5	NABL Group	: Atmospheric Pollution	6	Discipline	: Noise

### TEST REPORT

LOCATION	Units	TEST PROTOCOL	RESULTS			LIMITS
			L <sub>Max</sub>	L <sub>Min</sub>	L <sub>eq</sub>	L <sub>eq</sub>
Near D.G. Acoustic Enclosure	dB(A)	IS 9989:1981,RA 2001	72.5	64.5	70	75 dB(A) Day Time & 70 dB(A) Night Time
Latitude:22°48'52.57"N						
Longitude :86°14'9.39"E						

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

Authorised Signatory  
**Dr. Deependra Kumar Sinha**  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager

## Summary of CREP (Corporate Responsibility for Environment Conservation) activity done so far and proposed to do in future.

Since the inauguration of our plant was on 06.03.12 (about only 8.5 years back), CREP activity are in progress. Some of the compliance which has been completed so far and proposed to do in future is as below mention.

### Compliance of CREP Recommendations for iron and steel Plant

SL No	CREP GUIDELINES	ACTION PLANNED
1	Fugitive emissions from material handling, conveying and screening operations shall be evacuated in closed systems and extracted by Fabric filters or ESPs or equally effective methods	N/A
2	Pollution control systems shall be operated as an integral part of production to ensure minimum emissions. Timely evacuation of dust (from Dust catchers, ESPs, Bag filter hoppers etc.) shall be routinely organized.	N/A
3	Fugitive emissions shall be controlled by controlled wetting and /or by the use of crust formers.	The plants design includes fume extractor; fumes are burnt in the incinerator before it goes to air through stacks. Gaseous emission from MCL is design as per MoEF standard. Fume extraction system is design for solvent vapors incineration, water scrubber system is implemented for alkaline substances. Fugitive emission is anticipated as nil
4	Flue dust, collected within the dust catchers shall be evacuated using closed vessels or employing equally effective methods to minimize fugitive dust.	N/A
5	Cooling water shall be recycled and reused	Two no. of water cooling towers and waste water treatment plant has been installed. Waste water is recycling and reused. Close Circuit Cooling water scheme implemented at site. Design of Water system and ETP takes care of all the norms.

**ANNEXURE - XI**

6	Domestic discharges which are not reused, shall meet outfall, only after conforming to the specified effluent discharge standards.	N/A
7	The areas where high noise levels persist continuously for a significant period of time like Furnace area, Gas Cleaning Plant area, etc. shall be earmarked as High Noise Zone areas and accordingly it shall be displayed at appropriate places for warning employees. Through Integrated Maintenance Management system, necessary care shall be taken to minimize the noise at these areas.	In MCL Zinc pot area has been earmarked as high noise zone area and it has been displayed there. All the person working there has been provided with ear muff /ear plug. Acoustics enclosure for DG set and Air Compressor done.
8	Employees who are continuously exposed to high noise levels shall be provided with earplugs or earmuffs.	All the persons working at high noise level have been provided ear muff /ear plug.
9	Appropriate measures shall be taken, so that employees are not getting exposed to higher noise levels for a significant period of time.	Being complied.
10	Noise levels at various areas of the plant shall be regularly monitored and reviewed	Included in EMP. Regular monitoring will be done and reported accordingly. All equipments area design in accordance with EPA rules for control of noise levels.
11	Areas where continuous exposure cannot be avoided, necessary care shall be taken to insulate them from the surroundings.	Being complied
12	All efforts shall be made to minimize the generation of wastes and maximize its effective utilization	Included in EMP, Waste water treatment plant has been installed.
13	Wherever it becomes unavoidable, except resorting to option of dumping, in such cases, the wastes shall be disposed under controlled conditions.	Included in EMP. SLF has been installed. Incinerator installed.
14	All the wastes from the pollution control systems or treatment units shall be reused or recycled to the extent possible.	Included in EMP. Waste water treatment plant has been installed & after treatment water is being used for gardening.
15	Disposal of wastes shall be done in such a way that the pressure on land and subsequent land contamination shall be minimum.	Included in EMP. No open dumping on land. SLF has been made and Incinerator has been installed.

## CSR of Tata BlueScope Steel Pvt. Ltd

Since the inauguration of our plant was on 06.03.12 (about only 8.5 years back) we have started the CSR activities in a very humble manner. Some of the activities are mentioned below:

Month	No. of Activity	Activity Name	Description	Cost incurred
April-20	1	Supply of Drinking water to community near CSP plant	Supply of clean drinking water in nearby bustee	₹ 4,000.00
May-20	1	Supply of Drinking water to community near CSP plant	Supply of clean drinking water in nearby bustee	₹ 4,000.00
	2	Covid relief package - Grocery Packets Distribution during Lockdown	Volunteers arranged 100 packets of grocery for the needy people in the nearby bustee (Lalbhtata and Babudih)	₹ 400.00
June-20	1	Supply of Drinking water to community near CSP plant	Supply of clean drinking water in nearby bustee	₹ 4,000.00
	2	Covid relief package - Grocery Packets Distribution during Lockdown	Volunteers arranged 100 packets of grocery for the needy people in the nearby bustee (Lalbhtata and Babudih)	₹ 500.00
July-20	1	Supply of Drinking water to community near CSP plant	Supply of clean drinking water in nearby bustee	₹ 4,000.00
August-20	1	Supply of Drinking water to community near CSP plant	Supply of clean drinking water in nearby bustee	₹ 4,000.00
September-20	1	Supply of Drinking water to community near CSP plant	Supply of clean drinking water in nearby bustee	₹ 4,000.00



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Annexure - XIII



**ENGINEERING SERVICES PVT. LTD.**  
ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED  
NABL Accreditation & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis

## TEST REPORT OF WATER QUALITY

<b>Test Report No. : ELES/RNC/2020/644</b>		<b>Report Release Date : 15.10.2020</b>	
<b>Service Order No. : 8210003577/CS4</b>		<b>Service Order Date : 31.07.2020</b>	
<b>URL No. : TC883920000000034P</b>			
<b>CUSTOMER DETAILS</b>		<b>SAMPLE DETAILS</b>	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/SW/59
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Sampling Date	: 23.09.2020
		Sample Received Date	: 25.09.2020
Plant Status	: Operational	Type of Sample	: Surface Water
		Source of Sample/Location	: Baghunhato Ghat, Near to the Plant
Period of Analysis	: 25.09.2020 to 15.10.2020	Sampling Procedure	: ELES/DOC/SMPL/01
		Sample Collected By	: ELES Pvt.Ltd
		Sample Condition	: Sealed & Preserved

### TEST REPORT

PARAMETER	Units	TEST PROTOCOL	RESULTS	IS 2296:1982; Class C: Clause 3.3
pH (at 24.8 °C)	--	APHA 23 <sup>rd</sup> Edition, 4500-H <sup>+</sup> -B	7.4	6.5-8.5
Conductivity (at 24.8 °C)	µS/cm	APHA 23 <sup>rd</sup> Edition, 2510 B	403	--
Turbidity	NTU	APHA 23 <sup>rd</sup> Edition, 2130 B	16.3	--
Total Suspended Solids (TSS)	mg/l	APHA 23 <sup>rd</sup> Edition, 2540 D	22	--
Total Dissolved Solids (TDS)	mg/l	APHA 23 <sup>rd</sup> Edition, 2540 C	310	1500
Total Alkalinity	mg/l	IS 3025 (Part-23):1986:RA 2014	100	--
Chloride as Cl	mg/l	IS 3025 (Part-32): 1988: RA 2014	21.4	600
Chemical Oxygen Demand (COD)	mg/l	IS 3025 (Part-58): 2006: RA 2017	12.8	--
Biological Oxygen Demand (BOD) for 3 days at 27 °C)	mg/l	IS 3025 (Part-44): 1993: RA 2014	2.7	3
Total Hardness	mg/l	APHA 23 <sup>rd</sup> Edition, 2340 C	114	--
Sulphate as SO <sub>4</sub>	mg/l	IS 3025 (Part-24):1986:RA 2014	4.0	400
Fluoride as F	mg/l	IS 3025 (Part-60):2008:RA 2013	1.24	1.5
Nitrate as NO <sub>3</sub> *	mg/l	IS 3025 (Part-34):1988	2.41	50
Phenolic Compounds*	mg/l	IS 3025 (Part-43):1992	B.D.L(D.L:0.001)	0.005
Colour*	Hazen	IS 3025 (Part-04): 1983	5	300
Arsenic as As*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.001	0.2
Hexavalent Chromium as Cr <sup>6+</sup> *	mg/l	APHA 23 <sup>rd</sup> Edition, 3500 B	B.D.L(D.L:0.02)	0.05



# ENVIRONMENTAL LABORATORIES &

Annexure - XIII



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## TEST REPORT OF WATER QUALITY

Test Report No.	: ELES/RNC/2020/644	Report Release Date	: 15.10.2020	
Service Order No.	: 8210003577/CS4	Service Order Date	: 31.07.2020	
URL No.	: TC883920000000034P			
PARAMETER	Units	TEST PROTOCOL	RESULTS	IS 2296:1982; Class C: Clause 3.3
Total Chromium as Cr*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.005	--
Iron as Fe*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	0.413	50

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

Remarks: 1. pH done at Lab.

2. ( \* ) - Parameters are out sourced to NABL accredited Lab at Kolkata.

Authorised Signatory

**Dr. Deependra Kumar Sinha**  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager





CIN: U74999JH2018PTC011125

**ENVIRONMENTAL LABORATORIES &**

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Annexure-XIIA

**TEST REPORT OF WATER QUALITY**

Test Report No.	: ELES/RNC/2020/500	Report Release Date	: 07.09.2020
LOA No.	: FY 20-21	Work Order Date	: 20.07.2020
ULR NO.	: TC883920000000009P		
<b>CUSTOMER DETAILS</b>		<b>SAMPLE DETAILS</b>	
Customer Name	: Tata Blue Scope Steel Limited	Sample Ref. No.	: ELES/RNC/2020/DR/12
Address	: At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Sampling Date	: 24.07.2020
Plant Status	: Operational	Sample Received Date	: 27.07.2020
Period of Analysis	: 27.07.2020 to 17.08.2020	Type of Sample	: Drinking Water
		Source of Sample/Location	: Canteen
		Sampling Procedure	: ELES/DOC/SMPL/01
		Sample Collected By	: ELES Pvt.Ltd
		Sample Condition	: Sealed & Preserved

**TEST REPORT**

PARAMETER	Units	TEST PROTOCOL	RESULTS	LIMITS as per IS:10500:2012
<b>Biological</b>				
Coliform*	mg/l	IS 15185:2016	Absent	per 100 ml
Escherichia Coli*	mg/l	IS 15185:2016	Absent	per 100 ml
<b>Chemical</b>				
pH (at 26.7°C)	--	APHA 23 <sup>rd</sup> Edition 2017,4500-H <sup>+</sup> -B	7.7	6.5-8.5
Conductivity	µS/Cm	APHA 23 <sup>rd</sup> Edition 2017, 2510 B	417	--
Turbidity	NTU	APHA 23 <sup>rd</sup> Edition 2017,2130 B	0.84	1
Total Dissolved Solids (TDS)	mg/l	APHA 23 <sup>rd</sup> Edition 2017,2540 C	211	500
Total Alkalinity	mg/l	APHA 23 <sup>rd</sup> Edition 2017, 2320 B	80	200
Chloride as Cl	mg/l	IS 3025 (Part-32): 1988: RA 2014	24	250
Total Hardness	mg/l	APHA 23 <sup>rd</sup> Edition 2017, 2340 C	20.2	200
Sulphate as SO <sub>4</sub> <sup>2-</sup>	mg/l	IS 3025 (Part-24):1986:RA 2014	12.1	200
Fluoride as F	mg/l	APHA 23 <sup>rd</sup> Edition 2017,4500-F-D	0.4	1
Colour*	Hazen	IS 3025 (Part-04): 1983	5	5
Nitrate as NO <sub>3</sub> *	mg/l	IS 3025 (Part-34): 1988	6.10	45
Calcium as Ca*	mg/l	IS 3025 (Part-40): 1991	20.3	75
Magnesium as Mg*	mg/l	IS 3025 (Part-46): 1994	10.5	30
Residual Free Chlorine*	mg/l	IS 3025 (Part-26): 1986	<0.10	0.2
Phenolic Compounds as C <sub>6</sub> H <sub>5</sub> OH*	mg/l	IS 3025 (Part-43): 1992	B.D.L(D.L:0.001)	0.001
Mineral Oil*	mg/l	IS 3025 (Part-39): 1991	<0.01	0.5
Anionic Surfactants as MBAS*	mg/l	Annex K of IS 13428:2005	B.D.L(D.L:0.05)	0.2



CIN: U74999JH2018PTC011125

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Environmental Pollution Monitoring & Analysis

Annexure-XIII



TC-8839

**TEST REPORT OF WATER QUALITY**

Test Report No. : ELES/RNC/2020/500	Report Release Date : 07.09.2020
LOA No. : FY 20-21	Work Order Date : 20.07.2020
ULR No : TC88392000000009P	

**TEST REPORT**

PARAMETER	Units	TEST PROTOCOL	RESULTS	LIMITS as per IS:10500:2012
Cyanide*	mg/l	IS 3025 (Part-27): 1986	B.D.L(D.L.:0.02)	0.05
Odour*	--	IS 3025 (Part-05): 1983	Agreeable	Agreeable
Taste*	--	IS 3025 (Part-07): 1984	Agreeable	Agreeable
Sulphide as H <sub>2</sub> S*	mg/l	IS 3025 (Part-29): 1986	B.D.L(D.L.:0.05)	0.05
Ammonia (as Total Ammonia -N)**	mg/l	IS 3025 (Part-34): 1988	0.48	0.5
<b>Metals</b>				
Arsenic as As*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.001	0.01
Cadmium as Cd*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.001	0.003
Total Chromium as Cr*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.005	0.05
Copper as Cu*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.005	0.05
Lead as Pb*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.005	0.01
Manganese as Mn*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.005	0.1
Nickel as Ni*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.005	0.02
Selenium as Se*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.005	0.01
Barium as Ba*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	0.02457	0.7
Silver as Ag*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	0.01252	0.1
Molybdenum as Mo*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.005	0.07
Iron (as Fe)*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.005	1.0
Boron (as B)*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	<0.01	0.5
Zinc (as Zn)*	mg/l	APHA 23 <sup>rd</sup> Edition, 3125 B	0.154	5.0
Mercury as Hg*	mg/l	IS 3025 (Part-48): 2000	<0.001	0.001
Polynuclear Aromatic Hydrocarbons (PAH)*	mg/l	SO-IN-MUL-TE-023	<0.00005	0.0001
Polychlorinated Biphenyls (PCB)*	mg/l	SO-IN-MUL-TE-022	<0.00005	0.0005
Chloramines as Cl <sub>2</sub> *	mg/l	IS 3025 (Part-26): 1986	<0.1	4.0
Radio Active Materials – Alpha*	Bq.L <sup>-1</sup>	IS 14194 (Part-2):2013	B.D.L(D.L.:0.007)	0.1
Radio Active Materials – Beta*	Bq.L <sup>-1</sup>	IS 14194 (Part-1):2013	B.D.L(D.L.:0.113)	1.0

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

Remarks: 1. pH done at Site.

2. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata and Odisha.

3. (\*\*) - Parameters are not under NABL Scope.

Dr. Deependra Kumar Sinha  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager



CIN: U74999JH2018PTC011125

**ENVIRONMENTAL LABORATORIES &**PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA,  
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Phone/Fax No.: 0651-2290103**ENGINEERING SERVICES PVT. LTD.**ISO 9001:2015 CERTIFIED, OHSAS 18001:2007 CERTIFIED  
NABL Accredited & JSPCB Certified Lab. for  
Environmental Pollution Monitoring & Analysis

Annexure - XIV



TC-8839

**TEST REPORT OF SOIL QUALITY**

Test Report No. : ELES/RNC/2020/424	Report Release Date : 07.09.2020
LOA No. : FY 20-21	Work Order Date : 20.07.2020
ULR No : TC883920000000008P	
<b>CUSTOMER DETAILS</b>	
Customer Name : Tata Blue Scope Steel Limited	Sample Ref. No. : ELES/RNC/2020/SL/11
Address : At. Bara, P.O- Agrico, Jamshedpur- 831009, Dist.- East Singhbhum.	Sampling Date : 24.07.2020
Plant Status : Operational	Sample Received Date : 27.07.2020
Period of Analysis : 27.07.2020 to 19.08.2020	Type of Sample : Soil
	Source of Sample/Location : Near SLF
	Sampling Procedure : ELES/DOC/SMPL/05
	Sample Collected By : ELES Pvt.Ltd
	Sample Condition : Sealed & Preserved

**TEST REPORT**

PARAMETER	Units	TEST PROTOCOL	RESULTS
pH	--	IS 2720 (Part-26):1987; RA 2011	6.6
Soil Texture	--	Soil Testing India	Sandy Loam
% Sand*	%	F.A.O.U.N 2005	76.3
% Silt*	%	F.A.O.U.N 2005	4.0
% Clay*	%	F.A.O.U.N 2005	19.7
Conductivity	μS/Cm	IS 14767:2000; RA 2016	150.2
Water Holding Capacity**	%	IS 1475:2000	54.5
Bulk Density*	g/cm <sup>3</sup>	SO-IN-MUL-TE-105	1.2276
Moisture Content	%	IS 2720 (Part-2):1973; RA 2015	12.05
Total Organic Carbon*	%	IS:2720 (Part-22):1972;RA 2006	0.19
Available Phosphorus as P*	mg/kg	SO-IN-MUL-TE-105	<5.0
Chloride as Cl*	mg/kg	SO-IN-MUL-TE-105	29.8
Total Soluble Sulphate as SO <sub>4</sub> *	%	IS 2720(Part-27):1977	3.125
Available Sodium as Na*	mg/kg	SO-IN-MUL-TE-105	126.19
Available Potassium as K*	mg/kg	SO-IN-MUL-TE-105	1605.04
Total Organic Matter*	%	Walkely and Black, 1934	0.25

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

Remarks: 1. (\*) - Parameters are out sourced to NABL accredited Lab at Kolkata.  
2. (\*\*) - Parameters are not under NABL Scope.  
Authorised Signatory  
Dr. Deependra Kumar Sinha  
Ph. D. Environmental Engg.  
ELES Pvt. Ltd. Technical Manager

**Annexure XV**

<b>Sr. No</b>	<b>Financial Year</b>	<b>Production in MT</b>
1	2010-2011	Nil
2	2011-2012	11,798
3	2012-2013	1,21,100
4	2013-2014	1,56,215
5	2014-2015	1,79,743
6	2015-2016	1,93,507.30
7	2016-2017	2,12,881
8	2017-2018	2,07,408
9	2018-2019	2,22,768
10	2019-2020	2,20,838
11	2020-2021 till Sep'20.	92,413

