TEST REPORT

Technical Report	**(6721)190-0036**	July 23, 2021
Date Received	July 09, 2021	Page 1 of 23

Factory Company Name：	VARDHMAN FABRICS (A UNIT OF VARDHMAN TEXTILES LTD)
Factory Address:	REHTI ROAD, TEHSIL- BUDNI, DIST. SEHORE (MADHYA PRADESH)-466445
Project No.:	/
Client Reference No.:	/
Sampling Method:	I001) Raw Wastewater (Color)– 6 hours Time – weighted Composite I002) Raw Wastewater (Non- Color) – 6 hours Time – weighted Composite I003) Discharged Wastewater – 6 hours Time – weighted Composite
Sample Pick Up Date:	July 07, 2021
Wastewater Discharge to:	Direct Discharge (80% RO (Recycled)/ 20% Gardening/ Irrigation)
On-Site Effluent Treatment Plant (ETP):	YES
Discharge Type:	Direct Discharge
Off-site ETP name (if applicable):	/
Local Regulation: / Ordinance requirements related to wastewater discharged are followed:	AWB-53163
Permit Validation Date:	02/01/2021 to 31/03/2024
Parameters Exceeded Local Regulation	N/A
Legal compliance:	N/A
Conventional Parameters Overall Category:	Foundational Limit
Test Period:	July 07, 2021 to July 23, 2021
Sample Description:	I001) Dark Blue Color liquid – Raw Wastewater (Color) I002) Transparent Color liquid – Raw Wastewater (Non- Color) I003) Light Grey Color liquid – Discharged Wastewater
Parameters exceeded holding Time:	N/A

Bureau Veritas Consumer Products Services (India) Pvt. Ltd.,
C-19, Sec – 7 Noida (U.P.) 201301 PH: 4368283/205

ULR -TC631221000094255P

REMARK

If there are questions or concerns on this report, please contact act the following persons:

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This report shown the test result of the auxiliary chemical and/or raw material samples, which collected during particular factory audit. The results of this report shall not be used for any regulatory compliance purposes.

* The sampling is agreed with client.

BUREAU VERITAS CONSUMER PRODUCTS SERVICES (INDIA) PVT. LTD.

SIGNATORIES

RAHUL SRIVASTAVA
(Manager – Analytical)

1A) Conventional Parameters	**I001**	**I002**	**I003**
Temperature	NR	NR	☐
TSS			☐
COD			☐
Total-N			☐
pH Value			☐
Color [m^{-1}] (436nm; 525nm; 620nm)			☐
BOD_5			☐
Ammonium-N			☐
Total-P			☐
AOX			☐
Oil and Grease			☐
Phenol			☐
Coliform			☐
Persistent Foam			☐
ANIONS - Cyanide	☐	☐	☐
ANIONS - Sulfide	NR	NR	☐
ANIONS - Sulfite	NR	NR	☐
1B) Conventional Parameters – METALS	☐	☐	☐

Note / Key :

- ☐ – Meet Foundational Limit / Meet discharge license criteria/ Meet Reporting
- ■ – Exceeding Foundational Limit / Exceeding discharge license criteria/Exceeding
- NR – Not Requested / Not required

ZDHC MRSL Substances	**I001**	**I002**	**I003**
2A) APs and APEOs	o	o	o
2B) Chlorobenzenes and Chlorotoluenes	o	o	o
2C) Chlorophenols	o	o	o
2D) Azo Dyes	o	o	o
2E) Carcinogenic Dyes	o	o	o
2F) Disperse Dyes	o	o	o
2G) Flame Retardants	o	o	o
2H) Glycols	o	o	o
2I) Halogenated Solvents	o	o	o
2J) Organotin Compounds	o	o	o
2K) Perfluorinated and Polyfluorinated	o	o	o
2L) Phthalates	o	o	o
2M) Poly Aromatic Hydrocarbons	o	o	o
2N) Volatile Organic Compounds	o	o	o

Note / Key :

- ● – Detected
- o – Not Detected
- N/A – Not Applicable

Objective

The environment samples were tested for below parameters.

1A) Conventional Parameters
1B) Conventional Parameters – METALS
2A) APs and APEOs
2B) Chlorobenzenes and Chlorotoluenes
2C) Chlorophenols
2D) Azo Dyes
2E) Carcinogenic Dyes
2F) Disperse Dyes
2G) Flame Retardants
2H) Glycols
2I) Halogenated Solvents
2J) Organotin Compounds
2K) Perfluorinated and Polyfluorinated Chemicals
2L) Phthalates
2M) Poly Aromatic Hydrocarbons
2N) Volatile Organic Compounds

Sampling Plan

Basically, three environment samples were sampled per factory, including 1) Raw Wastewater (Color Raw wastewater) , 2) Discharged Wastewater (Non-Color Raw wastewater) and 3) Discharged Wastewater (Treated wastewater). Total number of sample collected will be depended on the actual factory facilities and manufacturing processes.

Method of sampling used is time-weighted composite grab samples (agreed with client.). Composite sampling shall be performed for no less than six hours, with no more than one hour between discrete samples. Each discrete sample shall be of equal volume. Wastewater and freshwater samples should, as much as possible, be collected simultaneously, during the time that PU is in normal operation. The sampling shall aim to analyse the snapshot of water quality characteristics of the operating PU. Under no circumstance shall samples be taken during times when the production process is not running or the wastewater is diluted due to heavy rainfall, etc.

Remark :

- Sampling procedure is with reference to below standards:
  1) South Australia EPA Guidelines (June 2007), Regulatory Monitoring and Testing Water and Wastewater Sampling.
  2) Australia EPA (Victoria) Guideline (June 2009), Sampling and Analysis of Waters, Wastewaters, Soils and Wastes.
  3) ISO 5667-3:2003, Water Quality - Sampling - Part 3: Guidance on the Preservation and Handling of Water Samples.
  4) ASTM D3976-92 (Reapproved 2010), Standard Practice for Preparation of Sediment Samples for Chemical Analysis.
- Field data records are attached in Appendix B.

Test Result

1A) Conventional Parameters

Temperature

Test Method : Measurement by thermometer

Tested Item(s)	Result	Unit	Conclusion
I003	34 (Foundational)	deg. C	DATA

Note:

deg. C = degree Celsius (°C)
Foundational Limit: ▲15 / max. 35°C; Progressive Limit: ▲10 / max. 30°C; Aspirational Limit: ▲5 / max. 25°C

Total Suspended Solids (TSS)

Test Method : APHA 2540D

Tested Item(s)	Result	Unit	Conclusion
I003	10 (Progressive)	mg/L	DATA

Note:

mg/L = milligram per liter
Foundational Limit: 50 mg/L; Progressive Limit: 15 mg/L; Aspirational Limit: 5 mg/L

Chemical Oxygen Demand (COD)

Test Method : APHA 5220D

Tested Item(s)	Result	Unit	Conclusion
I003	75 (Progressive)	mg/L	DATA

Note:

mg/L = milligram per liter
Foundational Limit: 150 mg/L; Progressive Limit: 80 mg/L; Aspirational Limit: 40 mg/L

Total Nitrogen (Total-N)

Test Method : APHA 4500-Norg-B

Tested Item(s)	Result	Unit	Conclusion
I003	<1.0 (Aspirational)	mg/L	DATA

Note:

mg/L = milligram per liter
Foundational Limit: 20 mg/L; Progressive Limit: 10 mg/L; Aspirational Limit: 5 mg/L

pH Value

Test Method : Reference to ISO 10523

-	**Unit**	**Result**
Test Item(s)	-	I003
Parameter	-	-
Temp. of sample	deg. C	34
pH value of sample		8.2 (Comply with ZDHC WWG requirements)
Conclusion	-	DATA

Note:

Temp. = Temperature deg. C = degree Celsius (°C)
Limit: 6 – 9

Color [m^{-1}] (436nm; 525nm; 620nm)

Test Method : With reference to ISO 7887-B

Tested Item(s)	**Result**	**Unit**	**Conclusion**
I003	2.7;1.0;0.6 (Progressive)	m^{-1}	DATA

Note:
Foundational Limit: 7;5;3 m^{-1}; Progressive Limit: 5;3;2 m^{-1}; Aspirational Limit: 2;1;1 m^{-1}

Biochemical Oxygen Demand (BOD_5)

Test Method : APHA 5210B

Tested Item(s)	**Result**	**Unit**	**Conclusion**
I003	15 (Progressive)	mg/L	DATA

Note:

mg/L = milligram per liter
Foundational Limit: 30 mg/L; Progressive Limit: 15 mg/L; Aspirational Limit: 5 mg/L

Ammonia Nitrogen

Test Method : APHA 4500 NH_3-C

Tested Item(s)	**Result**	**Unit**	**Conclusion**
I003	<1.0 (Aspirational)	mg/L	DATA

Note:

mg/L = milligram per liter
Foundational Limit: 10 mg/L; Progressive Limit: 1 mg/L; Aspirational Limit: 0.5 mg/L

Total Phosphorus (Total-P)

Test Method : APHA 4500P-D

Tested Item(s)	Result	Unit	Conclusion
I003	<0.05 (Aspirational)	mg/L	DATA

Note:

mg/L = milligram per liter
Foundational Limit: 3 mg/L; Progressive Limit: 0.5 mg/L; Aspirational Limit: 0.1 mg/L

Adsorbable Organic Halogen (AOX)

Test Method : Reference to ISO 9562

Tested Item(s)	Result	Unit	Conclusion
I003	0.76 (Progressive)	mg/L	DATA

Note:

mg/L = milligram per liter
Foundational Limit: 5 mg/L; Progressive Limit: 1 mg/L; Aspirational Limit: 0.1 mg/L

Oil and Grease

Test Method : Reference to ISO 9377-2/ APHA 5520-B

Tested Item(s)	Result	Unit	Conclusion
I003	< 2.0 (Aspirational)	mg/L	DATA

Note:

mg/L = milligram per liter
Foundational Limit: 10 mg/L; Progressive Limit: 2 mg/L; Aspirational Limit: 0.5 mg/L

Phenol

Test Method : APHA 5530 C

Tested Item(s)	Result	Unit	Conclusion
I003	< 0.01 (Aspirational)	mg/L	DATA

Note:

mg/L = milligram per liter
Foundational Limit: 0.5 mg/L; Progressive Limit: 0.01 mg/L; Aspirational Limit: 0.001 mg/L

Coliform

Test Method : Reference to ISO 9308-1

Tested Item(s)	Result	Unit	Conclusion
I003	8 (Aspirational)	bacteria/ 100 mL	DATA

Note:

bacteria/100 mL = bacteria per 100 milliliters
Foundational Limit: 400 / 100 ml; Progressive Limit: 100 / 100 ml; Aspirational Limit: 25 / 100 ml

Foam

Test Method : Visual

Tested Item(s)	Result	Unit	Conclusion
I003	No foam (Comply with ZDHC WWG requirements)	-	DATA

ANIONS - Sulfide

Test Method : APHA 4500 $S^{2-}F$

Tested Item(s)	Result	Unit	Conclusion
I003	< 2.0	mg/L	DATA

Note:

mg/L = milligram per liter
Foundational Limit: 0.5 mg/L; Progressive Limit: 0.05 mg/L; Aspirational Limit: 0.01 mg/L

ANIONS - Sulfite

Test Method : Reference to ISO 10304-3/ APHA 4500 $SO3^{2-}B$

Tested Item(s)	Result	Unit	Conclusion
I003	< 2.0 (Progressive)	mg/L	DATA

Note:

mg/L = milligram per liter
Foundational Limit: 2 mg/L; Progressive Limit: 0.5 mg/L; Aspirational Limit: 0.2 mg/L

1B) Conventional Parameters – METALS

Heavy Metals	**I001 *(µg/L)***	**I002 *(µg/L)***	**I003 *(µg/L)***
Antimony(Sb) *Foundational Limit: 100 ug/L;* *Progressive Limit: 50 ug/L;* *Aspirational Limit: 10 ug/L*	2 (Aspirational)	2 (Aspirational)	8 (Aspirational)
Chromium(Cr), total *Foundational Limit: 200 ug/L;* *Progressive Limit: 100 ug/L;* *Aspirational Limit: 50 ug/L*	12 (Aspirational)	8 (Aspirational)	10 (Aspirational)
Cobalt(Co) *Foundational Limit: 50 ug/L;* *Progressive Limit: 10 ug/L;* *Aspirational Limit: 5 ug/L*	ND (Aspirational)	ND (Aspirational)	ND (Aspirational)
Copper(Cu) *Foundational Limit: 2000 ug/L;* *Progressive Limit: 100 ug/L;* *Aspirational Limit: 50 ug/L*	794 (Foundational)	60 (*Progressive)*	54 (*Progressive)*
Nickel (Ni) *Foundational Limit: 200 ug/L;* *Progressive Limit: 20 ug/L;* *Aspirational Limit: 5 ug/L*	7 (*Progressive)*	6 (Progressive)	8 (Progressive)
Silver (Ag) *Foundational Limit: 100 ug/L;* *Progressive Limit: 10 ug/L;* *Aspirational Limit: 1 ug/L*	ND (Aspirational)	ND (Aspirational)	ND (Aspirational)
Zinc(Zn) *Foundational Limit: 5000 ug/L;* *Progressive Limit: 1000 ug/L;* *Aspirational Limit: 100 ug/L*	35 (Aspirational)	52 (Aspirational)	64 (Aspirational)
Arsenic (As) *Foundational Limit: 50 ug/L;* *Progressive Limit: 10 ug/L;* *Aspirational Limit: 5 ug/L*	ND (Aspirational)	ND (Aspirational)	ND (Aspirational)
Cadmium(Cd) *Foundational Limit: 100 ug/L;* *Progressive Limit: 5 ug/L;* *Aspirational Limit: 1 ug/L*	0.10 (Aspirational)	ND (Aspirational)	0.16 (Aspirational)
Lead(Pb) *Foundational Limit:100 ug/L;* *Progressive Limit: 10 ug/L;* *Aspirational Limit: 5 ug/L*	4 (Aspirational)	5 (Aspirational)	4 (Aspirational)
Mercury (Hg) *Foundational Limit: 10 ug/L;* *Progressive Limit: 1 ug/L;* *Aspirational Limit: 0.5 ug/L*	ND (Aspirational)	ND (Aspirational)	ND (Aspirational)

Heavy Metals	**I001** ***(µg/L)***	**I002** ***(µg/L)***	**I003** ***(µg/L)***
Chromium VI(CrVI) *Foundational Limit: 50 ug/L;* *Progressive Limit: 5 ug/L;* *Aspirational Limit: 1 ug/L*	ND (Aspirational)	ND (Aspirational)	ND (Aspirational)
Cyanide(CN-) *Foundational Limit: 200 ug/L;* *Progressive Limit: 100 ug/L;* *Aspirational Limit: 50 ug/L*	ND (Aspirational)	ND (Aspirational)	ND (Aspirational)

Others Priority Chemical Groups

	I001 ***(µg/L)***	**I002** ***(µg/L)***	**I003** ***(µg/L)***
2A) APs and APEOs	ND	ND	ND
2B) Chlorobenzenes and Chlorotoluenes	ND	ND	ND
2C) Chlorophenols	ND	ND	ND
2D) Azo Dyes	ND	ND	ND
2E) Carcinogenic Dyes	ND	ND	ND
2F) Disperse Dyes	ND	ND	ND
2G) Flame Retardants	ND	ND	ND
2H) Glycols	ND	ND	ND
2I) Halogenated Solvents	ND	ND	ND
2J) Organotin Compounds	ND	ND	ND
2K) Perfluorinated and Polyfluorinated Chemicals	ND	ND	ND
2L) Phthalates	ND	ND	ND
2M) Poly Aromatic Hydrocarbons	ND	ND	ND
2N) Volatile Organic Compounds	ND	ND	ND

Remark：

- Test method, reporting limit and list of chemical are summarized in tables of Appendix A.
- ND = Not detected (Please refer to reporting limit shown in Appendix A.).
- All results are in ppb as unit.
- ppm = part(s) per million; ppb = part(s) per billion.
- NR – Not Requested / Not required

APPENDIX A - Photo of the Sample/ Sampling Location

I001) Sampling Point

Sampling location as per GPS
(North 28.5999104, East 77.3193728)

I001) Sampling Point Surrounding Environment

Sampling location as per GPS
(North 28.5999104, East 77.3193728)

I001) pH Value

Sampling location as per GPS
(North 28.5999104, East 77.3193728)

I001) All sampled bottles with label

Sampling location as per GPS
(North 28.5999104, East 77.3193728)

I001) Sample for Phthalate Testing

Sampling location as per GPS

I001) Packaging

Sampling location as per GPS
(North 28.5999104, East 77.3193728)

(North 28.5999104, East 77.3193728)	

I002) Sampling Point  Sampling location as per GPS (North 28.5999104, East 77.3193728)	I002) Sampling Point Surrounding Environment  Sampling location as per GPS (North 28.5999104, East 77.3193728)
I002) pH Value  Sampling location as per GPS (North 28.5999104, East 77.3193728)	I002) All sampled bottles with label  Sampling location as per GPS (North 28.5999104, East 77.3193728)

I002) Sample for Phthalate Testing

Sampling location as per GPS
(North 28.5999104, East 77.3193728)

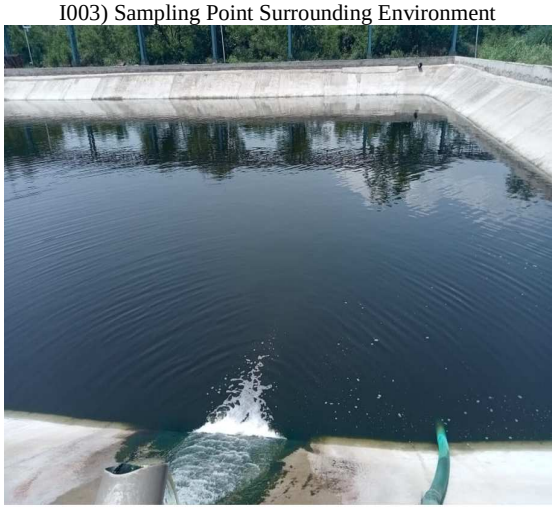
I002) Packaging

Sampling location as per GPS
(North 28.5999104, East 77.3193728)

I003) Sampling Point

Sampling location as per GPS
(North 28.5999104, East 77.3193728)

I003) Sampling Point Surrounding Environment



Sampling location as per GPS
(North 28.5999104, East 77.3193728)

I003) pH Value

Sampling location as per GPS
(North 28.5999104, East 77.3193728)

I003) All sampled bottles with label

Sampling location as per GPS

	(North 28.5999104, East 77.3193728)
I003) Sample for Phthalate Testing  Sampling location as per GPS (North 28.5999104, East 77.3193728)	I003) Packaging  Sampling location as per GPS (North 28.5999104, East 77.3193728)

APPENDIX B

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg)/(ppm)	
2A. Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers	Nonylphenol NP, mixed isomers	Various (incl. 104-40-5, 11066-49-2, 25154-52-3, 84852-15-3)	5	0.4	NP/OP: ISO 18857-2 (modified dichloromethane extraction) or ASTM D7065 (GC/MS or LC/MS(-MS) OPEO/NPEO: ISO18857-2 or ASTM D7065(LC/MS; GC/MS or LC/MSMS for n=1,2)
	Octylphenol OP, mixed isomers	Various (incl. 140-66-9, 1806-26-4, 27193-28-8)	5	0.4	
	Octylphenol ethoxylates (OPEO)	Various (incl. 9002-93-1, 9036-19-5, 68987-90-6)	5	0.4	
	Nonylphenol ethoxylates (NPEO)	Various (inc. 9016-45-9, 26027-38-3, 37205-87-1,	5	0.4	

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg)/(ppm)	
		68412-54-4, 127087-87-0)			APEO 1-18
2B. Chlorobenzenes and Chlorotoluenes	Monochlorobenzene	108-90-7	0.2	0.2	USEPA 8260B,8270D. Dichloromethane extraction followed by GC/MS
	1,2-Dichlorobenzene	95-50-1	0.2	0.2	
	1,3-Dichlorobenzene	541-73-1	0.2	0.2	
	1,4-Dichlorobenzene	106-46-7	0.2	0.2	
	1,2,3-Trichlorobenzene	87-61-6	0.2	0.2	
	1,2,4-Trichlorobenzene	120-82-1	0.2	0.2	
	1,3,5-Trichlorobenzene	108-70-3	0.2	0.2	
	1,2,3,4-Tetrachlorobenzene	634-66-2	0.2	0.2	
	1,2,3,5-Tetraclorobenzene	634-90-2	0.2	0.2	
	1,2,4,5-Tetrachlorobenzene	95-94-3	0.2	0.2	
	Pentachlorobenzene	608-93-5	0.2	0.2	
	Hexachlorobenzene	118-74-1	0.2	0.2	
	2-Chlorotoluene	95-49-8	0.2	0.2	
	3-Chlorotoluene	108-41-8	0.2	0.2	
	4-Chlorotoluene	106-43-4	0.2	0.2	
	2,3-Dichlorotoluene	32768-54-0	0.2	0.2	
	2,4-Dichlorotoluene	95-73-8	0.2	0.2	
	2,5-Dichlorotoluene	19398-61-9	0.2	0.2	
	2,6-Dichlorotoluene	118-69-4	0.2	0.2	
	3,4-Dichlorotoluene	95-75-0	0.2	0.2	
	3,5-Dichlorotoluene	25186-47-4	0.2	0.2	
	2,3,4-Trichlorotoluene	7359-72-0	0.2	0.2	
	2,3,6-Trichlorotoluene	2077-46-5	0.2	0.2	
	2,4,5-Trichlorotoluene	6639-30-1	0.2	0.2	
	2,4,6-Trichlorotoluene	23749-65-7	0.2	0.2	
	3,4,5-Trichlorotoluene	21472-86-6	0.2	0.2	
	2,3,4,5-Tetrachlorotoluene	76057-12-0	0.2	0.2	
	2,3,5,6-Tetrachlorotoluene	29733-70-8	0.2	0.2	
	2,3,4,6-Tetrachlorotoluene	875-40-1	0.2	0.2	
	Pentachlorotoluene	877-11-2	0.2	0.2	
2C. Chlorophenols	2-Chlorophenol	95-57-8	0.5	0.05	USEPA 8270 D Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC/MS
	3-Chlorophenol	108-43-0	0.5	0.05	
	4-Chlorophenol	106-48-9	0.5	0.05	
	2,3-Dichlorophenol	576-24-9	0.5	0.05	
	2,4-Dichlorophenol	120-83-2	0.5	0.05	
	2,5-Dichlorophenol	583-78-8	0.5	0.05	
	2,6-Dichlorophenol	87-65-0	0.5	0.05	
	3,4-Dichlorophenol	95-77-2	0.5	0.05	
	3,5-Dichlorophenol	591-35-5	0.5	0.05	
	2,3,4-Trichlorophenol	15950-66-0	0.5	0.05	
	2,3,5-Trichlorophenol	933-78-8	0.5	0.05	
	2,3,6-Trichlorophenol	933-75-5	0.5	0.05	
	2,4,5-Trichlorophenol	95-95-4	0.5	0.05	
	2,4,6-Trichlorophenol	88-06-2	0.5	0.05	
	3,4,5-Trichlorophenol	609-19-8	0.5	0.05	
	2,3,4,5-Tetrachlorophenol	4901-51-3	0.5	0.05	
	2,3,4,6-Tetrachlorophenol	58-90-2	0.5	0.05	
	2,3,5,6-Tetrachlorophenol	935-95-5	0.5	0.05	
	Pentachlorophenol (PCP)	87-86-5	0.5	0.05	
2D. Dyes - Azo (Forming Restricted Amines)	4,4`-Methylene-bis-(2-chloro-aniline)	101-14-4	0.1	0.2	EN 14362. Reduction step with Sodiumdithionite, solvent extraction, GC/MS or LC/MS
	4,4'-methylenedianiline	101-77-9	0.1	0.2	
	4,4`-Oxydianiline	101-80-4	0.1	0.2	
	4-Chloroaniline	106-47-8	0.1	0.2	

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg) /(ppm)	
	3,3`-Dimethoxybenzidine	119-90-4	0.1	0.2	
	3,3`-Dimethylbenzidine	119-93-7	0.1	0.2	
	6-methoxy-m-toluidine (p-Cresidine)	120-71-8	0.1	0.2	
	2,4,5-Trimethylaniline	137-17-7	0.1	0.2	
	4,4`-Thiodianiline	139-65-1	0.1	0.2	
	4-Aminoazobenzene	60-09-3	0.1	0.2	
	4-Methoxy-m-phenylenediamine	615-05-4	0.1	0.2	
	4,4`-Methylene-di-o-toluidine	838-88-0	0.1	0.2	
	2,6-Xylidine	87-62-7	0.1	0.2	
	o-Anisidine	90-04-0	0.1	0.2	
	2-Naphthylamine	91-59-8	0.1	0.2	
	3,3`-Dichlorobenzidine	91-94-1	0.1	0.2	
	4-Aminodiphenyl	92-67-1	0.1	0.2	
	Benzidine	92-87-5	0.1	0.2	
	o-Toluidine	95-53-4	0.1	0.2	
	2,4-Xylidine	95-68-1	0.1	0.2	
	4-Chloro-o-toluidine	95-69-2	0.1	0.2	
	4-Methyl-m-phenylenediamine	95-80-7	0.1	0.2	
	o-Aminoazotoluene	97-56-3	0.1	0.2	
	5-nitro-o-toluidine	99-55-8	0.1	0.2	
2E. Dyes-Carcionogenic or Equivalent Concern	C.I. Direct Black 38	1937-37-7	500	10	Liquid Extraction LC/MS
	C.I. Direct Blue 6	2602-46-2	500	10	
	C.I. Acid Red 26	3761-53-3	500	10	
	C.I. Basic Red 9	569-61-9	500	10	
	C.I. Direct Red 28	573-58-0	500	10	
	C.I. Basic Violet 14	632-99-5	500	10	
	C.I. Disperse Blue 1	2475-45-8	500	10	
	C.I. Disperse Blue 3	2475-46-9	500	10	
	C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5	500	10	
	C.I. Basic Green 4 (malachite green chloride)	569-64-2	500	10	
	C.I. Basic Green 4 (malachite green oxalate)	2437-29-8	500	10	
	C.I. Basic Green 4(malachite green)	10309-95-2	500	10	
	Disperse Orange 11	82-28-0	500	10	
2F. Dyes-disperse (sensitizing)	Disperse Yellow 1	119-15-3	50	2	Liquid Extraction LC/MS
	Disperse Blue 102	12222-97-8	50	2	
	Disperse Blue 106	12223-01-7	50	2	
	Disperse Yellow 39	12236-29-2	50	2	
	Disperse Orange 37/59/76	13301-61-6	50	2	
	Disperse Brown 1	23355-64-8	50	2	
	Disperse Orange 1	2581-69-3	50	2	
	Disperse Yellow 3	2832-40-8	50	2	
	Disperse Red 11	2872-48-2	50	2	
	Disperse Red 1	2872-52-8	50	2	
	Disperse Red 17	3179-89-3	50	2	
	Disperse Blue 7	3179-90-6	50	2	
	Disperse Blue 26	3860-63-7	50	2	
	Disperse Yellow 49	54824-37-2	50	2	
	Disperse Blue 35	12222-75-2	50	2	

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg)/(ppm)	
	Disperse Blue 124	61951-51-7	50	2	
	Disperse Yellow 9	6373-73-5	50	2	
	Disperse Orange 3	730-40-5	50	2	
	Disperse Blue 35	56524-77-7	50	2	
2G. Flame Retardants	Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	5	1	ISO 22032, USEPA527 and USEPA8321B. Dichloromethane extraction GC/MS or LC/MS(-MS)
	Decabromodiphenyl ether (DecaBDE)	1163-19-5	5	1	
	Tris(2,3-dibromopropyl) phosphate (TRIS/TDBPP)	126-72-7	5	1	
	Pentabromodiphenyl ether (PentaBDE)	32534-81-9	5	1	
	Octabromodiphenyl ether (OctaBDE)	32536-52-0	5	1	
	Bis(2,3-dibromopropyl) phosphate (BIS/BDBPP)	5412-25-9	5	1	
	Tris(aziridinyl)-phosphineoxide (TEPA)	545-55-1	5	1	
	Polybromobiphenyls (PBBs)	59536-65-1	5	1	
	Tetrabromobisphenol A (TBBPA)	79-94-7	5	1	
	Hexabromocyclododecane (HBCDD)	3194-55-6	5	1	
	2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	5	1	
	Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	5	1	
	Short chain chlorinated paraffins (SCCPs) (C10-C13)	85535-84-8	5	1	
2H. Glycols	Bis(2-methoxyethyl)-ether	111-96-6	50	10	US EPA 8270 Liquid Extraction LC/MS
	2-ethoxyethanol	110-80-5	50	10	
	2-ethoxyethyl acetate	111-15-9	50	10	
	Ethylene glycol dimethyl ether	110-71-4	50	10	
	2-methoxyethanol	109-86-4	50	10	
	2-methoxyethylacetate	110-49-6	50	10	
	2-methoxypropylacetate	70657-70-4	50	10	
	Triethylene glycol dimethyl ether	112-49-2	50	10	
2I. Halogenated Solvents	1,2-Dichloroethane	107-06-2	1	2	USEPA 8260B Headspace GC/MS or Purgeand-Trap-GC/MS
	Methylene Chloride	75-09-2	1	2	
	Trichloroethylene	79-01-6	1	2	
	Tetrachloroethylene	127-18-4	1	2	
2J. Organotin Compounds	Mono-, di- and tri-methyltin derivatives	Multiple	0.01	0.2	ISO 17353 Derivatisation with NaB(C2H5) GC/MS
	Mono-, di- and tri-butyltin derivatives	Multiple	0.01	0.2	
	Mono-, di- and tri-phenyltin derivatives	Multiple	0.01	0.2	
	Mono-, di- and tri-octyltin derivatives	Multiple	0.01	0.2	
	Monomethyltin	Multiple	0.01	0.2	
	Dimethyltin	Multiple	0.01	0.2	

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg)/(ppm)	
	Trimethyltin	Multiple	0.01	0.2	
	Monobutyltin	Multiple	0.01	0.2	
	Dibutyltin	Multiple	0.01	0.2	
	Tributyltin	Multiple	0.01	0.2	
	Monophenyltin	Multiple	0.01	0.2	
	Diphenyltin	Multiple	0.01	0.2	
	Triphenyltin	Multiple	0.01	0.2	
	Monooctyltin	Multiple	0.01	0.2	
	Dioctyltin	Multiple	0.01	0.2	
	Trioctyltin	Multiple	0.01	0.2	
2K. Perfluorinated and Polyfluorinated Chemicals (PFCs)	Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.01	0.10	DIN 38407-42 (modified) Ionic PFC: Concentration or direct injection, LC/MS(-MS); Non-ionic PFC (FTOH): derivatisation with acetic anhydride, followed by GC/MS
	Perfluoro-n-octanoic acid (PFOA)	335-67-1	0.01	0.10	
	Perfluorobutanesulfonic acid (PFBS)	29420-49-3, 29420-43-3	0.01	0.10	
	Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	0.01	0.10	
	8:2 FTOH	678-39-7	1	1	
	6:2 FTOH	647-42-7	1	1	
2L. Phthalates (including all other esthers of phthalic acid)	Di-2-ethylhexyl phthalate (DEHP)	117-81-7	10	2	US EPA 8270D, ISO 18856 Dichloromethane extraction GC/MS
	Dimethoxyethyl phthalate (DMEP)	117-82-8	10	2	
	Di-n-octyl phthalate (DNOP)	117-84-0	10	2	
	Di-iso-decyl phthalate (DIDP)	26761-40-0	10	2	
	Di-iso-nonyl phthalate (DINP)	28553-12-0	10	2	
	Di-n-hexyl phthalate (DnHP)	84-75-3	10	2	
	Dibutyl phthalate (DBP)	84-74-2	10	2	
	Butyl benzyl phthalate (BBP)	85-68-7	10	2	
	Dinonyl phthalate (DNP)	84-76-4	10	2	
	Diethyl phthalate (DEP)	84-66-2	10	2	
	Di-n-propyl phthalate (DPRP)	131-16-8	10	2	
	Di-iso-butyl phthalate (DIBP)	84-69-5	10	2	
	Di-cyclohexyl phthalate (DCHP)	84-61-7	10	2	
	Di-iso-octyl phthalate (DIOP)	27554-26-3	10	2	
	1,2-benzenedicarboxylic acid, di-C7-11-branched and linearalkyl esters (DHNUP)	68515-42-4	10	2	
	1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	10	2	
2M. Poly Aromatic Hydrocarbons (PaHs)	Benzo[a]pyrene (BaP)	50-32-8	1	0.2	DIN 38407-39 Solvent extraction GC/MS
	Anthracene	120-12-7	1	0.2	
	Pyrene	129-00-0	1	0.2	

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg) /(ppm)	
	Benzo[ghi]perylene	191-24-2	1	0.2	
	Benzo[e]pyrene	192-97-2	1	0.2	
	Indeno[1,2,3-cd]pyrene	193-39-5	1	0.2	
	Benzo[j]fluoranthene	205-82-3	1	0.2	
	Benzo[b]fluoranthene	205-99-2	1	0.2	
	Fluoranthene	206-44-0	1	0.2	
	Benzo[k]fluoranthene	207-08-9	1	0.2	
	Acenaphthylene	208-96-8	1	0.2	
	Chrysene	218-01-9	1	0.2	
	Dibenz[a,h]anthracene	53-70-3	1	0.2	
	Benzo[a]anthracene	56-55-3	1	0.2	
	Acenaphthene	83-32-9	1	0.2	
	Phenanthrene	85-01-8	1	0.2	
	Fluorene	86-73-7	1	0.2	
	Naphthalene	91-20-3	1	0.2	
2N. Volatile Organic Compound (VOCs)	Benzene	71-43-2	1	2	ISO 11423-1 Headspace- or Purge-and-Trap-GC/MS
	Xylene	1330-20-7	1	2	
	o-cresol	95-48-7	1	2	
	p-cresol	106-44-5	1	2	
	m-cresol	108-39-4	1	2	
1A. Conventional Parameters	Temperature	—	N/A	N/A	Apply the standard methods that best apply to the region (ISO, EU, US, China), please refer to ZDHC Wastewater Guidelines for more details on the testing method and the levels (Foundational, Progressive, and Aspirational). Cyanide: With reference to APHA 4500 CN—B,C&E and followed by UV analysis
	TSS	—	N/A	N/A	
	COD	—	N/A	N/A	
	Total-N	—	N/A	N/A	
	pH	—	N/A	N/A	
	Color [m^{-1}] (436nm; 525nm; 620nm)	—	N/A	N/A	
	BOD5	—	N/A	N/A	
	Ammonium-N	—	N/A	N/A	
	Total-P	—	N/A	N/A	
	AoX	—	N/A	N/A	
	Oil and Grease	—	N/A	N/A	
	Phenol	—	N/A	N/A	
	Coliform(bacteria/100ml)	—	N/A	N/A	
	Persistent Foam	—	Not visible	Not visible	
	ANIONS				
	Cyanide(CN-)	Various (incl. 57-12-5)	0.02	1	
	Sulfide	—	N/A	N/A	
	Sulfite	—	N/A	N/A	

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (mg/L) / (ppm)	Sludge (mg/kg) / (ppm)	
1B. Conventional Parameters - **METALS**	Antimony(Sb)	7440-36-0	0.001	N/A	Various Acid Digestion with ICP analysis please refer to ZDHC Wastewater Guidelines for more details on the testing method and the levels (Foundational, Progressive, and Aspirational).
	Chromium(Cr), total	7440-47-3	0.001	N/A	
	Cobalt(Co)	7440-48-4	0.001	N/A	
	Copper(Cu)	7440-50-8	0.001	N/A	
	Nickel (Ni)	7440-02-0	0.001	N/A	
	Silver (Ag)	7440-22-4	0.001	N/A	
	Zinc(Zn)	7440-66-6	0.001	N/A	
	Arsenic (As)	7440-38-2	0.001	2	
	Cadmium(Cd)	7440-43-9	0.0001	2	
	Chromium VI(CrVI)	18540-29-9	0.001	2	
	Lead(Pb)	7439-92-1	0.001	2	

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg) /(ppm)	
	Mercury (Hg)	7439-97-6	0.00005	0.2	Cr(VI): Various Solvent extraction and derivatisation followed by UV analysis
3. Conventional Parameters	Dry mass (total solids)	–	N/A	N/A	US EPA 160.3 / 209A

Note / Key :

ppm = part(s) per million; ppb = part(s) per billion
U. S. EPA = United States Environmental Protection Agency
APHA = American Public Health Association

APPENDIX C – Onsite Field Data Record Sheet

FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)

CPSD-AN-00613-DATA 04	
Issue Date:	
Version No.:	
Business Line: Analytical	

Laboratory Sample Number	(6721) 190-0036
Client Name	Vardhman Fabric
Field Contact Person	Mr. Sarkar
Project (Facility Name and address)	Budhni (MP), REHTI Road
Sampling Location / Description	
Sample Identification	
Sample Type	
Name of Sampler	Dhanraj Tripathi
Discharge mode	
Date of collection	07/07/21
Factory Type	Dyeing / Printing / washing

Field Data for Wastewater

Arrival Time	10:40							
Sample name	Colour							
Sample container number	1	2	3	4	5	6	7	8
Recording time	11:00	12:00	1:00	2:00	3:00	4:00		
pH	10.00	10.16	9.90	9.8	9.7	9.6		
Temp (°C)	31	32	34	27	27	24		
Color (visual estimation)	DK Blue		"	"	"	"		
Flow rate	NO	"	"	"	"	"		
Volume collected, mL	1500	1500	1500	1500	1500	1500		
Total volume collected	9 Ltr							

Analysis Required and Preservation Method

Tests (ZDHC MRSL Parameters)		Test required	Total of sample Vol.	Type of container	Preservation method
Composite test or Individual test (Remark 4)	1. Phthalates	✓	1000 mL		
	2. Chlorobenzenes / Chlorotoluene & [illegible]	✓			
	3. SCCPs	✓			
	4. APS	✓			
5. APEOs		✓	100 mL		
6. Chlorophenols & [illegible]		✓	100 mL		
7. Flame retardant		✓	300 mL		
8. Dyes		✓	10 mL		
9. Glycol		✓	10 mL		
10. *Pesticides		✗	1000 mL		
11. Nitrosamine		✗	10 mL		
12. Banned Azo[illegible]		—	2000 mL		
13. Three primary aromatic amines		✗	500 mL		
14. Organotin Compounds		✓	500 mL		
15. VOC & Halogenated Solvents (Remark 5)		✓	40 mL		
16. PFCs (Remark 6)		✓	2 mL		

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CPSD-AN-00613-DATA 04 FIELD DATA RECORD ZDHC SAMPLING

FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE
(COMPOSITE / INDIVIDUAL SAMPLING)

CPSD-AN-00613-DATA 04
Issue Date:
Version No.: 10
Business Line: Analytical

General Data

Laboratory Sample Number	(6721) 190-0036
Client Name	Bardhaman Dub[illegible]
Field Contact Person	Mangesh
Project (Facility Name and Address)	
Sampling Location / Description	Buddi (HP)
Sample Identification	[illegible]
Sample Type	[illegible]
Name of Sampler	Dilip [illegible]
Discharge mode	[illegible]
Date of collection	7/7/21
Factory Type	[illegible]

Field Data for Wastewater

Arrival Time	11.[illegible]							
Sample matrix	Wastewater before treatment ✓				NON-Carbon[illegible]			
	1	2	3	4	5	6	7	8
Sampling time	11.10	12.10	1.10	2.10	5.10	6.10		
pH	10.85	10.50	10.6	10.5	10.4	10.8		
Temp (°C)	52	25	56	24	32	24		
Color (visual estimation)	Turbid	"	"	"	"	"		
Flow rate	[illegible]	"	"	"	"	"		
Volume collected mL	1500	1500	1500	1502	1500	1500		
Total volume collected	9 Ltr							

Analysis Required and Preservation Method

Tests (ZDHC MRSL Parameters)	Test required (Y/N)	Total of sample size	Type of container	Preservation method
1. [illegible]	✓			
2. [illegible]	✓			
3. [illegible]	✓			
4. [illegible]	✓			
5. [illegible]	✓	[illegible]		
6. [illegible]	✓	[illegible]		
7. [illegible]	✓	[illegible]		
8. [illegible]	✓	[illegible]		
9. [illegible]	✓	[illegible]		
10. [illegible]	✗	[illegible]		
11. [illegible]	✗	[illegible]		
12. [illegible]	✗	[illegible]		
13. [illegible]	✗	[illegible]		
14. [illegible]	✓	[illegible]		
15. [illegible]	✓	[illegible]		
16. [illegible]	✓	[illegible]		

FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)

CPSD-AN-00613-DATA 04	
Issue Date:	
Version No.: 10	
Business Line: Analytical	

General Data

Laboratory Sample Number	(6721) 190-0036
Client Name	Vardhman Fabrics
Field Contact Person	Mr. Sushil — Phone No.
Project (Facility Name and Address)	Budhni (MP)
Sampling Location / Description	
Sample Identification	Zero discharge wastewater sampling plan
Sample Type	Composite Sample / Grab Sample (Please delete as appropriate)
Name of Sampler	Dhekey Joel
Discharge mode	Direct discharge to environment / Indirect discharge to sewage treatment plant
Date of Collection	7/7/21
Factory Type	Dyeing / Printing / Washing / Finishing / Others (please specify)

Field Data for Wastewater

Arrival Time	10.40 AM	Departure Time			
Field Parameters	pH	Temp °C	Color	Flow rate	Laboratory
Control No. of field equipment					
Factory with effluent treatment plant	Yes			No	
Sample Matrix	Incoming water (if required)				
	Wastewater before treatment				
	Wastewater after treatment – water at discharge point ✓ (After treatment)				
Sampler container number					

		1	2	3	4	5	6	7	8
Recording time	ID								
	Time	11.20	12.20	1.20	2.20	3.20	4.20		
pH		8.2	8.0	9.9	7.6	7.7	7.8		
Temp (°C)		34	26	28	34	34	34		
Color (visual estimation)		Lt. Green		"	"	"	"		
Flow rate (volume/time)		[illegible]							
Volume collected, mL		1500	1500	1500	1500	1500	750		
Total volume collected		9L	Remark: Total volume collected must be greater than total of sample size required						

Analysis Required and Preservation Method

Tests (ZDHC MRSL Parameters)		Test required (✓)	Total of sample size	Type of container	Preservation method
Combined test or Individual test (Remark 4)	1. Phthalate	✓	1000 mL total or 1000 mL each	Amber Glass washed with nitric acid	Without adding acid. Store sample at 2-8°C
	2. Chlorobenzenes, Chlorotoluene & PAH	✓			
	3. SCCPs	✓			
	4. APs	✓			
5. APEOs		✓	100 mL		
6. Chlorophenols & Cresols		✓	100 mL		
7. Flame retardant		✓	200 mL		
8. Dyes			10 mL		
9. Glycol		✓	50 mL		
10. Pesticides		✓	1000 mL		
11. Nitrosamine		✓	10 mL		
12. Benzoic Acid		✓	2000 mL		
13. Free primary aromatic amines		✓	500 mL		
14. Organotin Compounds			500 mL		
15. VOC & Halogenated Solvents (Remark 5)			30 mL		Fill to full container without air gap; acidify to pH 2 with HCl and store sample at 2-8°C
16. PFCs (Remark 6)			5 mL	PE, washed with methanol, [illegible]	Without adding acid. Store sample at 2-8°C

CPSD-AN-00613-DATA 04 FIELD DATA RECORD ZDHC SAMPLING(V10)

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FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE
(COMPOSITE / INDIVIDUAL SAMPLING)

CPSD-AN-00013-DATA 04	
Issue Date:	
Version No.: [illegible]	
Business Line: Analytical	

Parameters		Test required (✓)	Sample size	Type of container	Preservation method
Combined test or Individual test (Remark 1)	17. Total suspended solids (TSS)	✓	2000 mL total or 2000 mL each	Amber Glass, washed with nitric acid	Without adding acid. Store sample at 2-6°C
	18. Total Dissolved solids (TDS)				
19. Total Biochemical Oxygen Demand (BOD)		✓	1000 mL		
20. Colour		✓	100 mL		
21. Heavy Metals except Cr(VI) & Total P (Remark 6)		✓	[illegible]	PE, washed with nitric acid	[illegible]
22. Cyanide		✓	500 mL	Amber Glass, washed with [illegible]	[illegible]
23. Cr(VI)		✓	50 mL		[illegible]
24. Chemical oxygen demand (COD)		✓	100 mL	Amber Glass, washed with nitric acid	[illegible] Store sample at 2-6°C
25. Phenols		✓	500 mL		
26. Oil and Grease & Total Hydrocarbon		✓	1000 mL		
27. Trichloroethylene			20 mL		[illegible]
28. Sulfide (Remark 5)		✓	20 mL	PE, [illegible]	[illegible] Store sample at 2-6°C
29. Total Coliform (Remark 6)		✓	100 mL	PE, [illegible]	[illegible] Store sample at 2-6°C
30. E. coli (Remark 6)			125 mL		
31. [illegible]		✓	N.A.	[illegible]	
32. Sulfite		✓	100 mL	Amber Glass, [illegible]	[illegible] Store sample at 2-6°C
33. Tin[illegible]		✓	150 mL	Amber Glass, washed with nitric acid	[illegible] Store sample at 2-6°C
34. Ammonium [illegible]		✓	500 mL		
35. Adsorbable organically bound halogens (AOX)		✓	100 mL		[illegible]
36. Acute aquatic toxicity Luminous Bacteria, Fish, Egg, Daphnia, Algae			2000 mL		
37. Sulphate			100 mL		Without adding acid. Store sample at 2-6°C
38. Chloride			100 mL		
39. Others					
Observation Remark					

Remarks:

1. Individual sampling can be performed upon request.
2. The minimum sampling time for 2019 ZDHC guideline is [illegible] hours with no more than one hour between discrete samples. Sampling time could be adjusted upon request.
3. Scope of ZDHC guideline: Parameter 1-6, 12, 14-17, 19-26, 28, 30, 31-[illegible]
Scope of synthetic leather industry: Parameter 1-6, 12, 14-21, 23-26, 28, 30, 31, 32, 34, 37, 38
Scope of MMCF: Parameter 5, 14, 17, 19-21, 23-26, 28, 35-38
[illegible]
4. Refer to CPSD-AN-[illegible] [illegible]
5. Refer to CPSD-AN-[illegible] [illegible]
6. Refer to CPSD-AN-[illegible] [illegible]

Reviewed by: Dheeraj Raju (signature)
Full name

Date: 07/07/21

Comment from factory:

Acknowledgement by factory:

I hereby confirm that Bureau Veritas has completed the above sampling activity at captioned date, time and location. All samples were collected in [illegible]. Samples collected by Bureau Veritas were stored in a portable freezer / fridge that is maintained at [illegible]°C.

Signature of factory representative: A. Shekhar Pati
Full Name

Date: 7/7/21

CPSD-AN-00013-DATA 04 FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE

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