

# TEST REPORT

**Technical Report:** (6822)103-0246 April 24, 2022

Date Received: April 12, 2022 Page 1 of 22

M.N. Dyeing Printing & Washing Mills Ltd. Factory Company Name:

Factory Address: Baniarchala, Bhabanipur, Gazipur Sadar, Gazipur, 1740, Bangladesh.

Project No.: Not Applicable Client Reference No.: Not Applicable

Sampling Method: I001) Raw Wastewater - 6 hours Time - weighted Composite I002) Treated Wastewater - 6 hours Time - weighted Composite

Sample Pick Up Date: April 12, 2022

Wastewater Discharge to: Labonda River On-Site Effluent Treatment Plant Yes

(ETP):

Discharge Type: Direct Discharge

Off-site ETP name (if applicable): Not Applicable Off-site ETP address (if Not Applicable

applicable): Local Regulation: / Ordinance /

requirements related to wastewater

discharged are followed: Permit Validation Date: Parameters Exceeded Local

Regulation

Legal compliance:

Conventional Parameters Overall

Category:

Test Period: April 13, 2022 To April 24, 2022

Sample Description: Sample(s) received is/are stated to be:

I001) Black / lt. blue / blue color liquid - Raw Wastewater

I002) Reddish color liquid - Treated Wastewater

Parameters exceeded maximum

holding time:

Not Applicable

Not Applicable

Not Applicable

Not Applicable

Not Applicable

Foundational

Bureau Veritas Consumer Products Services (BD) Ltd. Plot # 130, DEPZ Extension Area Ganakbari, Savar, Dhaka, Bangladesh Tel: 88-02-7701464-6, Fax: 88-02-7701463 E-mail: bvcps.bd@bd.bureauveritas.com website: cps.bureauveritas.com

http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/and is intended for your e



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#### **REMARK**

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

General enquiry & Invoicing Mr. Sharan Roy,

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Mr. Mahabubur Rahman,

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Technical enquiry-Chemical Mr. M. Nur Alam,

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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 (BANGLADESH) LTD.

MD. RASHEDUL HAQUE MANAGER, RSL OPERATIONS



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# **Executive Summary**

1A) Conventional Parameters	1001	1002
Temperature		
TSS		
COD		
Total-N		
pH Value		
Color [m <sup>-1</sup> ] (436nm; 525nm; 620nm)		
BOD <sub>5</sub>		
Ammonium-N		
Total-P	NR	
AOX		
Oil and Grease		
Phenol		
Coliform		
Persistent Foam		
ANIONS – Cyanide		
ANIONS - Sulfide		
ANIONS - Sulfite		
1B) Conventional Parameters –METALS		

ZDHC MRSL Substances	I001	1002
2A) APs and APEOs	0	0
2B) Chlorobenzenes and Chlorotoluenes	0	0
2C) Chlorophenols	0	0
2D) Azo Dyes	0	0
2E) Carcinogenic Dyes	0	0
2F) Disperse Dyes	0	0
2G) Flame Retardants	0	0
2H) Glycols	0	0
2I) Halogenated Solvents	0	0
2J) Organotin Compounds	0	0
2K) Perfluorinated and Polyfluorinated Chemicals	0	0
2L) Phthalates	0	0
2M) Poly Aromatic Hydrocarbons	0	0
2N) Volatile Organic Compounds	0	0

# Note / Key:

- □ Meet Foundational Limit / Meet discharge license criteria
- - Exceeding Foundational Limit / Exceeding discharge license criteria
- NR Not Requested / Not required
- - Detected
- O Not Detected
- N/A Not Applicable



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### **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, two environment samples were sampled per factory, including 1) Discharged Wastewater (Raw wastewater) and 2) 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 refers to ZDHC Wastewater and Sludge Laboratory Sampling and Analysis Plan
- Field data records are attached in Appendix C.



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# **Test Result**

## 1A) Conventional Parameters

**Temperature** 

**Test Method**: Measurement by thermometer

Tested Item(s)	Result	Unit	Conclusion
I002	32.6 (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 : Reference to APHA 2540D, GB 11901, ISO 11923

Tested Item(s)	Result	Unit	Conclusion
I002	8 (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 : Reference to APHA 5220B & EPA 410.3, HJ 828

Tested Item(s)	Result	Unit	Conclusion
I002	24 (Aspirational)	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** : Reference to APHA 4500- N-C

Tested Item(s)	Result	Unit	Conclusion
I002	18.7 (Foundational)	mg/L	DATA

Note:

 $mg/L = milligram \ per \ liter$ 

Foundational Limit: 20 mg/L; Progressive Limit: 10 mg/L; Aspirational Limit: 5 mg/L



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## pH Value

**Test Method** : Reference to EPA 150.2

-	Unit	Result
Test Item(s)	-	I002
Parameter	-	-
Temp. of sample	deg. C	21.5
pH value of sample	le - (Comply with ZDHC WWG requiren	
Conclusion	_	DATA

Note:

Temp. = Temperature

deg. C = degree Celsius (°C)

Limit: 6 - 9

Color [m<sup>-1</sup>] (436nm; 525nm; 620nm)

**Test Method** : ISO 7887: 2011(E), B

Tested Item(s)	Result	Unit	Conclusion
I002	6.9; 4.9; 2.6 (Foundational)	m <sup>-1</sup>	DATA

Note:

Foundational Limit: 7;5;3 m<sup>-1</sup>; Progressive Limit: 5;3;2 m<sup>-1</sup>; Aspirational Limit: 2;1;1 m<sup>-1</sup>

#### Biochemical Oxygen Demand (BOD<sub>5</sub>)

**Test Method** : Reference to APHA 5210B & ALPA 5210B (5 days)

Tested Item(s)	Result	Unit	Conclusion
1002	7 (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

# Ammonium Nitrogen

**Test Method**: Reference to APHA 4500-NH<sub>3</sub> – B & F 22<sup>nd</sup> Edition 2012

Tested Item(s)	Result	Unit	Conclusion
I002	0.37 (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



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#### Total Phosphorus (Total-P)

**Test Method** : Reference to APHA 22<sup>nd</sup> Edition -4500-P.E (2012)

ĺ	Tested Item(s)	Result	Unit	Conclusion
	1002	0.68 (Foundational)	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

ſ	Tested Item(s)	Result	Unit	Conclusion
	I002	0.39 (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 EPA 1664B, APHA-5520 B and F

Tested Item(s)	Result	Unit	Conclusion
1002	1.0 (Progressive)	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
I002	<0.001 (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: 2014

Tested Item(s)	Result	Unit	Conclusion
I002	56 (Progressive)	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;



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#### Persistent Foam

Test Method : Visual

Tested Item(s)	Result	Unit	Conclusion
I002	No Foam (Comply with ZDHC WWG requirements)	-	DATA

#### ANIONS - Cyanide

**Test Method**: Reference to APHA 22<sup>nd</sup> Edition-4500-CN. C&E (2012), EPA 9010C, 9013 & 9014

Tested Item(s)	Result	Unit	Conclusion
I002	ND (Aspirational)	mg/L	DATA

Note:

mg/L = milligram per liter

ND = Not detected

Foundational Limit: 0.2 mg/L; Progressive Limit: 0.1 mg/L; Aspirational Limit: 0.05 mg/L

#### ANIONS - Sulfide

**Test Method**: Reference to APHA 4500-S<sup>2</sup>-D

Tested Item(s)	Result	Unit	Conclusion
1002	<0.1 (Foundational)	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 EPA 377.1, APHA 4500-SO<sub>3</sub><sup>2-</sup> (2012)

Tested Item(s)	Result	Unit	Conclusion
I002	1.0 (Foundational)	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



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# 1B) Conventional Parameters - METALS

Heavy Metals	I001 (mg/L)	I002 (mg/L)
Antimony(Sb)		
Foundational Limit: 0.1 mg/L;	0.019	ND
Progressive Limit: 0.05 mg/L;	(Progressive)	(Aspirational)
Aspirational Limit: 0.01 mg/L	,	
Chromium( Cr ), total		
Foundational Limit: 0.2 mg/L;	0.002	0.002
Progressive Limit: 0.1 mg/L;	(Aspirational)	(Aspirational)
Aspirational Limit: 0.05 mg/L	,	, ,
Cobalt( Co )		
Foundational Limit:0.05 mg/L;	ND	ND
Progressive Limit: 0.02 mg/L;	(Aspirational)	(Aspirational)
Aspirational Limit: 0.01 mg/L	,	, ,
Copper( Cu )		
Foundational Limit: 1 mg/L;	0.097	ND
Progressive Limit: 0.5 mg/L;	(Aspirational)	(Aspirational)
Aspirational Limit: 0.25 mg/L	,	, ,
Nickel (Ni)		
Foundational Limit:.0.2 mg/L;	ND	ND
Progressive Limit: 0.1 mg/L;	(Aspirational)	(Aspirational)
Aspirational Limit: 0.05 mg/L	( 1	( "I ,
Silver (Ag)		
Foundational Limit: 0.1 mg/L;	ND	ND
Progressive Limit: 0.05 mg/L;	(Aspirational)	(Aspirational)
Aspirational Limit: 0.005 mg/L	( 1	( "I ,
Zinc(Zn)		
Foundational Limit: 5 mg/L;	0.003	0.199
Progressive Limit: 1 mg/L;	(Aspirational)	(Aspirational)
Aspirational Limit: 0.5 mg/L	,	, ,
Arsenic (As)		
Foundational Limit: 0.05 mg/L;	ND	ND
Progressive Limit: 0.01 mg/L;	(Aspirational)	(Aspirational)
Aspirational Limit: 0.005 mg/L	,	, ,
Cadmium( Cd )		
Foundational Limit: 0.1 mg/L;	ND	ND
Progressive Limit: 0.05 mg/L;	(Aspirational)	(Aspirational)
Aspirational Limit: 0.01 mg/L		
Chromium VI( CrVI )		
Foundational Limit: 0.05 mg/L;	ND	ND
Progressive Limit: 0.005 mg/L;	(Aspirational)	(Aspirational)
Aspirational Limit: 0.001 mg/L		
Lead( Pb )		
Foundational Limit:0.1 mg/L;	ND	ND
Progressive Limit: 0.05 mg/L;	(Aspirational)	(Aspirational)
Aspirational Limit: 0.01 mg/L		
Mercury (Hg)		
Foundational Limit: 0.01 mg/L;	ND	ND
Progressive Limit: 0.005 mg/L;	(Aspirational)	(Aspirational)
Aspirational Limit :0.001 mg/L	/	, , ,



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# Others Priority Chemical Groups

	I001 (μg/L)	$1002 (\mu g/L)$
2A) APs and APEOs	ND	ND
2B) Chlorobenzenes and Chlorotoluenes	ND	ND
2C) Chlorophenols	ND	ND
2D) Azo Dyes	ND	ND
2E) Carcinogenic Dyes	ND	ND
2F) Disperse Dyes	ND	ND
2G) Flame Retardants	ND	ND
2H) Glycols	ND	ND
2I) Halogenated Solvents	ND	ND
2J) Organotin Compounds	ND	ND
2K) Perfluorinated and Polyfluorinated Chemicals	ND	ND
2L) Phthalates	ND	ND
2M) Poly Aromatic Hydrocarbons	ND	ND
2N) Volatile Organic Compounds	ND	ND

# Remark:

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



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# **APPENDIX A - Photo of the Sample/ Sampling Location**

I001) Sampling Point (GPS Location: N 24° 25' 30"; E 90° 32' 30.12")



I001) Sampling Point Surrounding Environment (GPS Location: N 24° 25' 30"; E 90° 32' 30.12")



I001) All sampled bottles with label



I001) pH value



I001) Sample for Phthalate Testing



I001) Packaging





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# **APPENDIX A - Photo of the Sample/ Sampling Location**

I002) Sampling Point (GPS Location: N 24° 25' 30"; E 90° 32' 30.12")



I002) Sampling Point Surrounding Environment (GPS Location: N 24° 25' 30"; E 90° 32' 30.12")



I002) All sampled bottles with label



I002) pH value



I002) Sample for Phthalate Testing



I002) Packaging





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# APPENDIX B

			Repor	t Limit	
Group	Substance (Testing parameter)	CAS No.	Wastew ater (ug/L)/(ppb)	Sludge (mg/kg) /(ppm)	Name of the testing method
	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
2A. Alkylphenol (AP) and	Octylphenol OP, mixed isomers	Various (incl. 140-66-9, 1806-26-4, 27193-28-8)	5	0.4	extraction) or ASTM D7065 (GC/MS or LC/MS(-MS)
Alkylphenol Ethoxylates (APEOs): including all isomers	Octylphenol ethoxylates (OPEO)	Various (incl. 9002-93-1, 9036-19-5, 68987-90-6)	5	0.4	OPEO/NPEO: ISO18857-2 or ASTM D7065(LC/MS; GC/MS
	Nonylphenol ethoxylates (NPEO)	Various (inc. 9016-45-9, 26027-38-3, 37205-87-1, 68412-54-4, 127087-87-0)	5	0.4	or LC/MSMS for n=1,2) APEO 1-18
	Monochlorobenzene	108-90-7	0.2	0.2	
	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	USEPA 8260B,8270D.
2B. Chlorobenzenes	4-Chlorotoluene	106-43-4	0.2	0.2	Dichloromethane
and Chlorotoluenes	2,3-Dichlorotoluene	32768-54-0	0.2	0.2	extraction followed by
	2,4-Dichlorotoluene	95-73-8	0.2	0.2	GC/MS
	2,5-Dichlorotoluene	19398-61-9	0.2	0.2	
	2,6-Dichlorotoluene	118-69-4	0.2	0.2	1
	3,4-Dichlorotoluene	95-75-0	0.2	0.2	
	3,5-Dichlorotoluene	25186-47-4	0.2	0.2	1
	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	
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			Repor	t Limit	
Group	Substance (Testing parameter)	CAS No.	Wastew ater (ug/L)/(ppb)	Sludge (mg/kg) /(ppm)	Name of the testing method
	2-Chlorophenol	95-57-8	0.5	0.05	
	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	USEPA 8270 D
	3,5-Dichlorophenol	591-35-5	0.5	0.05	Solvent extraction,
2C. Chlorophenols	2,3,4-Trichlorophenol	15950-66-0	0.5	0.05	derivatisation with
	2,3,5-Trichlorophenol	933-78-8	0.5	0.05	KOH, acetic anhydride
	2,3,6-Trichlorophenol	933-75-5	0.5	0.05	followed by GC/MS
	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	
	4,4`-Methylene-bis-(2-chloro-aniline)	101-14-4	0.1	0.2	
	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	
	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	
2D. Dyes - Azo	4-Methoxy-m- phenylenediamine	615-05-4	0.1	0.2	EN 14362. Reduction step with
(Forming Restricted Amines)	4,4`-Methylene-di-o- toluidine	838-88-0	0.1	0.2	Sodiumdithionite, solvent extraction,
,	2,6-Xylidine	87-62-7	0.1	0.2	GC/MS or LC/MS
	o-Anisidine	90-04-0	0.1	0.2	1
	2-Naphthylamine	91-59-8	0.1	0.2	1
	3,3`-Dichlorobenzidine	91-94-1	0.1	0.2	1
	4-Aminodiphenyl	92-67-1	0.1	0.2	1
	Benzidine	92-87-5	0.1	0.2	1
	o-Toluidine	95-53-4	0.1	0.2	1
	2,4-Xylidine	95-68-1	0.1	0.2	1
	4-Chloro-o-toluidine	95-69-2	0.1	0.2	1
	4-Methyl-m- phenylenediamine	95-80-7	0.1	0.2	
	o-Aminoazotoluene	97-56-3	0.1	0.2	1
	5-nitro-o-toluidine	99-55-8	0.1	0.2	1
	C.I. Direct Black 38	1937-37-7	500	10	
2E. Dyes-	C.I. Direct Blue 6	2602-46-2	500	10	1
Carcionogenic or	C.I. Acid Red 26	3761-53-3	500	10	Liquid Extraction
Equivalent Concern	C.I. Basic Red 9	569-61-9	500	10	LC/MS
Equivalent Concern	C.I. Direct Red 28	573-58-0	500	10	· ·



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			Repor	t Limit	
Group	Substance (Testing parameter)	CAS No.	Wastew ater (ug/L)/(ppb)	Sludge (mg/kg) /(ppm)	Name of the testing method
	C.I. Basic Violet 14	632-99-5	500	10	
	C.I. Disperse Blue 1	2475-45-8	500	10	1
	C.I. Disperse Blue 3	2475-46-9	500	10	1
	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	
	Disperse Yellow 1	119-15-3	50	2	
	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	Liquid Extraction LC/MS
	Disperse Yellow 3	2832-40-8	50	2	
2F. Dyes-disperse	Disperse Red 11	2872-48-2	50	2	
(sensitizing)	Disperse Red 1	2872-52-8	50	2	
(0.111111111111111111111111111111111111	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	
	Disperse Blue 124	61951-51-7	50	2	-
	Disperse Yellow 9	6373-73-5	50	2	4
	Disperse Orange 3	730-40-5	50	2	4
	Disperse Blue 35	56524-77-7	50	2	
	Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	5	1	
	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	ISO 22032, USEPA527
2G. Flame Retardants	Bis(2,3-dibromopropyl) phosphate (BIS/BDBPP)	5412-25-9	5	1	and USEPA8321B. Dichloromethane
Returdants	Tris(aziridinyl)- phosphineoxide (TEPA)	545-55-1	5	1	extraction GC/MS or LC/MS(-MS)
	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-	13674-87-8	5	1	



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		Repor	t Limit	
Substance (Testing parameter)	CAS No.	Wastew ater (ug/L)/( ppb)	Sludge (mg/kg) /(ppm)	Name of the testing method
isopropyl) phosphate (TDCP)				
Short chain chlorinated paraffins (SCCPs) (C10-C13)	85535-84-8	5	1	
Bis(2-methoxyethyl)-ether	111-96-6	50	10	
2-ethoxyethanol	110-80-5	50	10	
2-ethoxyethyl acetate	111-15-9	50	10	
Ethylene glycol dimethyl ether	110-71-4	50	10	US EPA 8270
2-methoxyethanol	109-86-4	50	10	Liquid Extraction LC/MS
2-methoxyethylacetate	110-49-6	50	10	LC/IVIS
2-methoxypropylacetate	70657-70-4	50	10	
Triethylene glycol dimethyl ether	112-49-2	50	10	
1,2-Dichloroethane	107-06-2	1	2	HIGEDA OZCOD
Methylene Chloride	75-09-2	1	2	USEPA 8260B
	79-01-6	1	2	Headspace GC/MS or
	127-18-4	1	2	Purgeand-Trap-GC/MS
Mono-, di- and tri-	Multiple	0.01	0.2	
Mono-, di- and tri-butyltin	Multiple	0.01	0.2	ISO 17353
Mono-, di- and tri-phenyltin	Multiple	0.01	0.2	Derivatisation with NaB(C2H5) GC/MS
Mono-, di- and tri-octyltin	Multiple	0.01	0.2	
Perfluorooctanesulfonic	1763-23-1	0.01	0.10	DIN 38407-42
Perfluoro-n-octanoic acid	335-67-1	0.01	0.10	(modified) Ionic PFC:
Perfluorobutanesulfonic acid (PFBS)	29420-49-3, 29420-43-3	0.01	0.10	Concentration or direct injection, LC/MS(-MS);
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	0.01	0.10	Non-ionic PFC (FTOH): derivatisation
8:2 FTOH	678-39-7	1	1	with acetic anhydride,
6:2 FTOH	647-42-7	1	1	followed by GC/MS
Di-2-ethylhexyl phthalate	117-81-7	10	2	
Dimethoxyethyl phthalate (DMEP)	117-82-8	10	2	]
Di-n-octyl phthalate	117-84-0	10	2	1
Di-iso-decyl phthalate (DIDP)	26761-40-0	10	2	US EPA 8270D, ISO
Di-iso-nonyl phthalate	28553-12-0	10	2	18856 Dichloromethane
Di-n-hexyl phthalate (DnHP)	84-75-3	10	2	extraction GC/MS
	84-74-2	10	2	1
Butyl benzyl phthalate	85-68-7	10	2	]
Dinonyl phthalate (DNP)	84-76-4 84-66-2	10	2	1
	isopropyl) phosphate (TDCP) Short chain chlorinated paraffins (SCCPs) (C10- C13) Bis(2-methoxyethyl)-ether 2-ethoxyethanol 2-ethoxyethyl acetate Ethylene glycol dimethyl ether 2-methoxyethylacetate 2-methoxyethylacetate Triethylene glycol dimethyl ether 1,2-Dichloroethane Methylene Chloride Trichloroethylene Tetrachloroethylene Mono-, di- and tri- methyltin derivatives Mono-, di- and tri-phenyltin derivatives Mono-, di- and tri-octyltin derivatives Mono-, di- and tri-octyltin derivatives Perfluorooctanesulfonic acid (PFOS) Perfluoro-n-octanoic acid (PFOA) Perfluoro-n-hexanoic acid (PFHxA) 8:2 FTOH 6:2 FTOH Di-2-ethylhexyl phthalate (DEHP) Dimethoxyethyl phthalate (DEHP) Di-n-octyl phthalate (DNOP) Di-iso-decyl phthalate (DNOP) Di-iso-nonyl phthalate (DINP) Di-n-hexyl phthalate (DINP) Diutyl phthalate (DBP) Butyl benzyl phthalate (DBP) Butyl benzyl phthalate (BBP)	isopropyl) phosphate (TDCP) Short chain chlorinated paraffins (SCCPs) (C10- C13) Bis(2-methoxyethyl)-ether 2-ethoxyethanol 2-ethoxyethyl acetate Ethylene glycol dimethyl ether 2-methoxyethylacetate 110-71-4 2-methoxyethylacetate 110-9-86-4 2-methoxyethylacetate 110-49-6 2-methoxyethylacetate 110-49-6 2-methoxypropylacetate 112-49-2 112-Dichloroethane 107-06-2 Methylene Chloride Trichlylene glycol dimethyl ether 1,2-Dichloroethane 107-06-2 Methylene Chloride Trichloroethylene 127-18-4 Mono-, di- and tri-methyltin derivatives Mono-, di- and tri-butyltin derivatives Mono-, di- and tri-phenyltin derivatives Mono-, di- and tri-octyltin derivatives Perfluorooctanesulfonic acid (PFOS) Perfluoro-n-octanoic acid (PFOS) Perfluoro-n-hexanoic acid (PFBS) Perfluoro-n-hexanoic acid (PFBS) Perfluoro-n-hexanoic acid (PFBS) Perfluoro-nhexanoic acid (PFBS) Perfluoro-n	Substance (Testing parameter)   CAS No.   Wastew ater (ug/L)/(ppb)	Strong   S



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			Repor	t Limit		
Group	Substance (Testing parameter)	CAS No.	Wastew ater (ug/L)/( ppb)	Sludge (mg/kg) /(ppm)	Name of the testing method	
	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		
	Benzo[a]pyrene (BaP)	50-32-8	1	0.2		
	Anthracene	120-12-7	1	0.2		
	Pyrene	129-00-0	1	0.2		
	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		
01 f D 1 d d	Benzo[b]fluoranthene	205-99-2	1	0.2	DD1 20 407 20	
2M. Poly Aromatic	Fluoranthene	206-44-0	1	0.2	DIN 38407-39	
Hydrocarbons	Benzo[k]fluoranthene	207-08-9	1	0.2	Solvent extraction	
(PaHs)	Acenaphthylene	208-96-8	1	0.2	GC/MS	
	Chrysene	218-01-9	1	0.2	1	
	Dibenz[a,h]anthracene	53-70-3	1	0.2	1	
	Benzo[a]anthracene	56-55-3	1	0.2	1	
	Acenaphthene	83-32-9	1	0.2	-	
	Phenanthrene	85-01-8	1	0.2	1	
	Fluorene	86-73-7	1	0.2	-	
	Naphthalene	91-20-3	1	0.2	-	
	1					
ANT TT 1 . "	Benzene	71-43-2	1	2	100 11 100 1	
2N. Volatile	Xylene	1330-20-7	1	2	ISO 11423-1	
Organic Compound	o-cresol	95-48-7	1	2	Headspace- or Purge-	
(VOCs)	p-cresol	106-44-5	1	2	and-Trap-GC/MS	
	m-cresol	108-39-4	1	2		
	Temperature	_	N/A	N/A	Apply the standard	
	TSS	_	N/A	N/A	methods that best apply	
	COD	-	N/A	N/A	to the region (ISO, EU,	
	Total-N	_	N/A	N/A	US, China), please refer	
	pH	_	N/A	N/A	to ZDHC Wastewater	
1A. Conventional	Color [m <sup>-1</sup> ] (436nm; 525nm; 620nm)	_	N/A	N/A	Guidelines for more details on the testing	
Parameters	BOD5	_	N/A	N/A	method and the levels	
	Ammonium-N	_	N/A	N/A	(Foundational,	
	Total-P	_	N/A	N/A	Progressive, and	
	AoX	_	N/A	N/A	Aspirational).	
	Oil and Grease	_	N/A	N/A		
		-			G '1 777'.1	
	Phenol	_	N/A	N/A	Cyanide: With reference to APHA	



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			Repor	t Limit	
Group	Substance (Testing parameter)	CAS No.	Wastew ater (ug/L)/( ppb)	Sludge (mg/kg) /(ppm)	Name of the testing method
	Persistent Foam	_	Not visible	Not visible	4500 CN—B,C&E and followed by UV
	ANIONS				analysis
	Cyanide( CN-)	Various (incl. 57-12-5)	0.02	1	
	Sulfide	_	N/A	N/A	
	Sulfite	_	N/A	N/A	
				t Limit	
Group	Substance (Testing parameter)	CAS No.	Wastew ater (mg/L) / (ppm)	Sludge (mg/kg) / (ppm)	Name of the testing method
	Antimony( Sb )	7440-36-0	0.001	N/A	Various
	Chromium( Cr ), total	7440-47-3	0.001	N/A	Acid Digestion with
	Cobalt( Co )	7440-48-4	0.001	N/A	ICP analysis
	Copper(Cu)	7440-50-8	0.001	N/A	
	Nickel (Ni)	7440-02-0	0.001	N/A	please refer to ZDHC
	Silver (Ag)	7440-22-4	0.001	N/A	Wastewater Guidelines
1B. Conventional	Zinc(Zn)	7440-66-6	0.001	N/A	for more details on the
Parameters -	Arsenic (As)	7440-38-2	0.001	2	testing method and the
METALS	Cadmium( Cd )	7440-43-9	0.0001	2	levels (Foundational,
	Chromium VI( CrVI )	18540-29-9	0.001	2	Progressive, and Aspirational).
	Lead(Pb)	7439-92-1	0.001	2	Aspirationar).
	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

**Remark:** The report [(6822)103-0246] was sub-contracted to India (Testtex India Laboratories Pvt. Ltd) for Coliform, Total-N & AOX Tests.



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# **APPENDIX C – Onsite Field Data Record Sheet**

(BA)						Hadasa a a an			613-DATA 04
(1007)	FII	ELD DATA RI						Issue Date:	
DATE OF THE PARTY		(CONP	OSITE / INE	DIVIDUAL S	AMPLING)			Version No.:	
VA-1780 DAYS				,				Business Li	ne: Analytical
eneral Data			(	CON	120	3-02			
aboratory Sample Numb	per:		(	0800	100	7-02	46		
lient Name:			- X-		f		1		- 8
ield Contact Person:		Alon S.	w Syed		Phone No: 🙆	1718-58	00 00		
roject (Facility Name an	d Address):	M.N DYE		nting d		Mills 1		anipun. q	- ຈາໄລແກຸ
ampling Location / Desc		ETP- In	- W	William or	on or dayla I ed	1.48(12 004	9) (9) (A)	arabole, ge	Velbalo
ample Identification:	31 past 1.	Zero discharge v	•	n					- 12
		Composite Samp			ae annronriata)	*			-
ample Type:			0 -		as appropriate;			3.00	-
ame of Sampler.		Md. Mas Direct discharge to			iver See Stream	\ OR Indirect die	charge to sewage	treatment plant	-
ischarge mode:				ony destination, is	iver, dea, diream	) OK martest are	cuaine to sewade	deathent plant	3
ate of collection:	6 5	12.04.2		and instruction	in a second				er i jua
actory Type:		Note: It would be		200	lease specify).				
		Note: it would be	selected littic ma	ii olla	**	N 12			
ield Data for Wastewa rrival Time:	ter	11.20		Departure Time		17.15		7	
		pH: 9.6		Temp : 4 3 • 7		Color: Bla	1 k	Flow rate :	(volume/min)
ield Parameters		pri. 3,6		remp. 4 3 1	<u> </u>	COID! BIA	.cr	I low rate .	(voidineitiiii)
ontrol No. of field equip	1-16-773	-		es				No .	77.
actory with effluent trea	ttment plant:	-	<del></del>			1	-	NO 0	
			Incoming water	0 0 0 0			R 38 - 33	71.50	
ample matrix:	8	220	Wastewater bef						
			Wastewater afte	er treatment - wa	ter at discharge	point	1		
ampler container numb	er	12			100			-	<b>!</b>
·		1	2	3	4	5	6	7	8
lecording time	iD ID								
tecororing time	Time	11.40	12.40	13.40	14.40	15.40	16.40		
н:	-	8.0	9.1	9.6	10.0	9.7	3.9		1
emp (°C) :		40.6	42.1	43.2	42.8	42.3	41.8		
Color (visual estimation)		L. Black	L. Bluz	Blue	Black	Black	Black	18	
Flow rate (volume/time)	m3/h	580	270	295	278	285			
/olume collected, mL	32763	167412	167×12	167712	167712	147412	167412		
Total volume collected	mL	12024	Remark: Total v	rolume collected	must be greater	than total of san	nple size require	d	
		11		9					
	Preservation Method	Test required	Total of		T 16			reservation met	
Tests (ZDHC	MRSL Parameters)	(v)	sample size		Type of contair	ter		reservation met	noa
West Total	1. Phthalate	-							
Combined test	2. Chlorobenzenes,		1000 mL total						
or Individual test	Chlorotoluene & PAH		or						
(Remark 4)	3. SCCPs	1	1000 mL each						
	4. APS	-		1					
			100 mL	1					
5. APEOs									
5. APEOs	agole .		100 ml	1					
6. Chlorophenols & Cre	esols	~	100 mL		·				
	esols	~	100 mL		Œ			Without adding a	
6. Chlorophenois & Cre 7. Flame retardant	esols			Amber	3lass,washed with	n nitric acid,	ě .	Without adding as Store sample at 2-	
6. Chlorophenols & Cre 7. Flame retardant 8. Dyes	esols	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	500 mL	Amber	3lass,washed with	n nitric acid,			
6. Chlorophenois & Cre 7. Flame retardant 8. Dyes 9. Glycol	esols	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	500 mL 10 mL 50 mL	Amber	3lass,washed with	n nitric sold,	8		
6. Chlorophenols & Cre 7. Flame retardant 8. Dyes	esols	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	500 mL 10 mL 50 mL	Amber	Blass,washed with	n nitric scid,	2		
6. Chlorophenois & Cre 7. Flame retardant 8. Dyes 9. Glycol	esols		500 mL 10 mL 50 mL	Amber	Blass,washed with	n nitric scid,			
6. Chlorophenois & Cre 7. Flame retardant 8. Dyes 9. Glycol 10. *Pesticides	esols	×	500 mL 10 mL 50 mL	Amber	Glass,washed with	n nitric acid,	2		
6. Chlorophenols & Cre 7. Flame retardant 8. Dyes 9. Glycol 10. "Pesticides 11. "Nitrosamine 12. Banned Azodyas		×	500 mL 10 mL 50 mL 1000 mL 10 mL 2000 mL	Amber	3lass,washed with	n nitric acid,	,		
6. Chlorophenols & Cre 7. Flame retardant 8. Dyes 9. Glycol 10. "Pesticides 11. "Nitrosemine 12. Banned Azodyas 13. "Fres primary aron	natic amines	×	500 mL 10 mL 50 mL 1000 mL 10 mL 2000 mL	Amber	3lass washed with	n nitric acid,	,		
6. Chlorophenols & Cre 7. Flame retardant 8. Dyes 9. Glycol 10. "Pesticides 11. "Nitrosamine 12. Banned Azodyas	natic amines	×	500 mL 10 mL 50 mL 1000 mL 10 mL 2000 mL	Amber	Blass,washed with	n nitric sold,		Store sample at 2-	8°C
6. Chlorophenols & Cre 7. Flame retardant 8. Dyes 9. Glycol 10. "Pesticides 11. "Nitrosemine 12. Banned Azodyes 13. "Free primary aron 14. Organotin Compo.	natic amines	×	500 mL 10 mL 50 mL 1000 mL 10 mL 2000 mL	Amber	Biass,washed will	n nitric sold,	Fill to full conta	Store sample at 2-	8°C



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

CPSD-AN-00613-DATA 04
Issue Date:
Version No.: 16

27. Heavy Metais except Cr(VI) & Total-P (Remark 6)	Tests (Conver	ntional Parameters)	Test required (v)	Total of sample size	Type of container	Preservation method
Amber Glass, washed with nitric acid,   Without adding acid Store sample at 2-8°C	or Individual test	(TSS)		or		
100 mL 21. Heavy Metals except Cr(Vi) & Total-P (Remark 5) 3 mL 22. Cyanide 3 mL 3 mL 4 mber Glass, washed with nitrio acid 3 Addist pt 12 with 1400, and afore at 2-8°C 3 Cyanide 3 mL 4 mber Glass, washed with pesticide grade acetone 4 Adjust pt 12 with 50% No.N., add 0.06 mt of 10% Na.S., So., and afore sample at 2-8°C 4 Adjust pt 12 with 50% No.N., add 0.06 mt of 10% Na.S., So., and afore sample at 2-8°C 4 Cyanide 4 Adjust pt 12 with 50% No.N., add 0.06 mt of 10% Na.S., So., and afore sample at 2-8°C 5 mL	(Remark 4)	(TDS)		2000 III, Bauri	Amber Glass, washed with nitric acid.	
27. Heavy Metais except Cr(VI) & Total-P (Remark 6)	19. 5-day Biochemical C	Oxygen Demand (BOD5)		1000 mL		Store sample at 2-8°C
9 mL   PE, washed with nitric acid   Aclidity to pH 2 with HNO <sub>3</sub> and store at 2-8°C	20. Colour	,	l	100 mL		
Na,S,O <sub>3</sub> , and store sample at 2-8°C	21. Heavy Metals excep 6)	Cr(Vi) & Total-P (Remark	-	9 mL	PE, washed with nitric acid	Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C
25 mL   Amber Glass; washed with nilric acid   Addity to pH 2 with HySO, Store sample at 2-8°C	22. Cyanide			500 mL	Amber Glass, washed with pesticide grade acetone	Adjust pH 12 with 50% NaOH, add 0.05 mt of 10% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , and store sample at 2-8°C
25. Phienois 26. Oil and Grease & Total Hydrocarbon 1000 mL 27. "Formaldehyde 28. Sulfide (Remark 5) 29. Total Coliform (Remark 6) 29. Sulfide (Remark 6) 29. Total Coliform (Remark 6) 29. Sulfide (Remark 6) 29. Total Coliform (Remark 6) 29. Sulfide (Remark 6) 20. Sulfide (Remark 6) 21. Sulfide (Remark 6) 22. Sulfide (Remark 6) 23. Sulfide (Remark 6) 24. Sulfide (Remark 6) 25. Sulfide (Remark 6) 26. Sulfide (Remark 6) 27. Sulfide (Remark 6) 28. Sulfide (Remark 6) 29. Total Coliform (Remark 6) 29. Total Coliform (Remark 6) 20. Sulfide (Remark 6) 21. Sulfide (Remark 6) 22. Sulfide (Remark 6) 23. Sulfide (Remark 6) 24. Sulfide (Remark 6) 25. Sulfide (Remark 6) 26. Sulfide (Remark 6) 27. Sulfide (Remark 6) 28. Sulfide (Remark 6) 29. Total Coliform (Remark 6) 29. Total Coliform (Remark 6) 20. Sulfide (Remark 6) 20. Sulfide (Remark 6) 20. Sulfide (Remark 6) 20. Sulfide (Remark 6) 21. Sulfide (Remark 6) 22. Sulfide (Remark 6) 23. Sulfide (Remark 6) 24. Sulfide (Remark 6) 25. Sulfide (Remark 6) 26. Sulfide (Remark 6) 27. Sulfide (Remark 6) 28. Sulfide (Remark 6) 29. Total Coliform (Remark 6) 29. Total Coliform (Remark 6) 20. Sulfide (Remark 6) 20. Sulfide (Remark 6) 20. Sulfide (Remark 6) 21. Sulfide (Remark 6) 22. Sulfide (Remark 6) 23. Sulfide (Remark 6) 24. Sulfide (Remark 6) 25. Sulfide (Remark 6) 26. Sulfide (Remark 6) 27. Sulfide (Remark 6) 28. Sulfide (Remark 6) 29. Total Coliform (Remark 6) 29. Total Coliform (Remark 6) 20. Sulfide (Remark 6) 20. Sulfide (Remark 6) 20. Sulfide (Remark 6) 20. Sulfide (Remark 6) 21. Sulfide (Remark 6) 22. Sulfide (Remark 6) 23. Sulfide (Remark 6) 24. Sulfide (Remark 6) 25. Sulfide (Remark 6) 26. Sulfide (Remark 6) 26. Sulfide (Remark 6) 27. Sulfide (Remark 6) 28. Sulfide (Remark 6) 29. Sul	23. Cr(VI)		<u></u>	95 mL		without air gap; adjust pH to 9.0-9.5 by adding
Store sample at 2-8°C	24. Chemical oxygen de	mand (COD)	,	150 mL		
25 mL   Fill to full container without air gap; acidify to pH 2 with Pt-20, and store sample at 2-8°C	25. Phenals	2 0		500 mL	Amber Glass; washed with nitric add	
28. Sulfide (Remark 5)   50 mL   PE, washed with posticide grade Acetone;   Fib to full container without air gap, add 2 drops of 2k. PE, washed with posticide grade Acetone;   Fib to full container without air gap, add 2 drops of 2k. PE, washed with posticide grade Acetone;   Fib to full container without air gap, add 2 drops of 2k. PE, washed Acetone;   Fib to full container without air gap, add 2 drops of 2k. PE, washed Acetone;   Fib to full container without air gap, add 2 drops of 2k. PE, washed Acetone;   Fib to full container without air gap, add 2 drops of 2k. PE.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Sicre sample at 2-8°C   Sicre sample at 2-8°C   Add 0,1 mi of 10% Na2_2O, keep in dark.   Sicre sample at 2-8°C   Add 0,1 mi of 10% Na2_2O, keep in dark.   Sicre sample at 2-8°C   Add 0,1 mi of 10% Na2_2O, keep in dark.   Sicre sample at 2-8°C   Add 0,1 mi of 10% Na2_2O, keep in dark.   Sicre sample at 2-8°C   Add 0,1 mi of 10% Na2_2O, keep in dark.   Sicre sample at 2-8°C   Add 0,1 mi of 10% Na2_2O, keep in dark.   Sicre sample at 2-8°C   Add 0,1 mi of 10% Na2_2O, keep in dark.   Sicre sample at 2-8°C   Add 0,1 mi of 10% Na2_2O, keep in dark.   Sicre sample at 2-8°C   Add 0,1 mi of 10% Na2_2O, keep in dark.   Sicre sample at 2-8°C   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Sicre sample at 2-8°C   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.   Add 0,1 mi of 10% Na2_2O, keep in dark.	26. Oil and Grease & To	ital Hydrocarbon	1.	1000 mL		0
28. Suifice (Remark 5)  50 mL  PE, washed with posticide grade Acetone;  Filt to full container without air gap; add 2 drops of 2h 2fro acetate, adjust pit to 9 with 6M NaOH 20 29. Total Coliform (Remark 6)  125 mL  PE, clean, startle, non-reactive  PE, clean, startle, non-reactive  125 mL  PE, clean, startle, non-reactive  N.A.  Foam higher than 45 cm (visual estimation): Yes_1 No_  31. Persistent foam  N.A.  Foam higher than 45 cm (visual estimation): Yes_2 No_  32. Sulfite  100 mL  Amber Glass, weshed with pesticide grade acetone  Add int. of 2.5% EDTA Store sample at 2-8°C  Add int. of 2.5% EDTA Store sample at 2-8°C  Add int. of 2.5% EDTA Store sample at 2-8°C  Add int. of 2.5% EDTA Store sample at 2-8°C  Acidify to pH 2 with H <sub>2</sub> SO <sub>4</sub> Store sample at 2-8°C  Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C  Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C  Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C  Without adding acid Store sample at 2-8°C  Without adding acid Store sample at 2-8°C	27. *Formaldehyde	8		25 mL		Fill to full container without air gap; acidify to pH 2 with H <sub>2</sub> SO <sub>4</sub> and store sample at 2-8°C
125 mL   PE, clean, sterile, non-reactive   Add 0; ml of 10% Na2 <sub>2</sub> 20, keep in dark   Store sample at 2-8°C	28. Sulfide (Remark 5)	a		50 mL		Fill to full container without air gap; add 2 drops of 2N zinc acetate, adjust pH to 9 with 6M NaOH
125 mt	29. Total Coliform (Rem	ark 6) .		125 mL	PE clean stedle	844.04 at 45409 No. 20
32. Sulfilte 100 mL Amber Glass, washed with pesticide grade acetone Add into 2.5% EDTA Store sample at 2.4°C  33. Total-N 100 mL Additing to pH 2 with hys0.4 Store sample at 2.4°C  34. Ammonium-N 500 mL Amber Glass, washed with nitrio acid.  35. Adsorbable organically bound heliogens (AOX) 100 mL Amber Glass, washed with nitrio acid.  36. Acute aquatic toxicity: 1000 mL Without adding acid Store sample at 2.8°C  37. Sulphate 100 mL Store sample at 2.8°C	30.E.coli (Remark 6)			125 mL		
33. Total-N 100 mL Acidify to pH 2 with H <sub>2</sub> SO <sub>4</sub> 34. Ammonium-N 500 mL Acidify to pH 2 with H <sub>2</sub> SO <sub>4</sub> 35. Adsorbable organically bound halogens (AOX) 100 mL Amber Glass; washed with nitrio acid.  36. Acute aqualic toxicity: 1000 mL Without adding acid 37. Sulphate 100 mL 38. Chloride 1100 mL	31. Persistent foam	160		N.A.	Foam higher than 45 cm (visu	rai estimation): Yes / No
33. Total-N 100 mL Addity to pH 2 with hts04 Store sample at 2-8°C  34. Ammonium-N 500 mL Addity to pH 2 with hts04 Store sample at 2-8°C  35. Addorabel organically bound helogens (AOX) 100 mL  Amber Glass; washed with nitrio acid.  4. Addity to pH 2 with HNO3 and store at 2-8°C  Addity to pH 2 with HNO3 and store at 2-8°C  Addity to pH 2 with HNO3 and store at 2-8°C  4. Amber Glass; washed with nitrio acid.  Without adding acid. Store sample at 2-8°C  38. Chloride 100 mL	32. Suifite			100 mL	Amber Glass, washed with pesticide grade acetone	
34. Ammonium-N  500 mL  Store sample at 2-8°C  Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C  Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C  Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C  Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C  Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C  Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C  Without adding acid Store sample at 2-8°C  37. Sulphate  100 mL  38. Chloride  100 mL	33. Total-N			100 mL		
36. Acute aquatic toxicity:  1000 mL  Amber Glass; washed with nitrio acid.  Without adding acid. Store sample at 2-8°C  38. Chloride  100 mL	34. Ammonium-N	8		500 mL	2	
1000 mL   1000 mL   1000 mL   1000 mL   Without adding acid Store sample at 2-8°C   1000 mL   28. Chloride   100 mL   29. Chloride	35. Adsorbable organica	lly bound halogens (AOX)		100 mL		Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C
100 mL   Store sample at 2-8°C   Store sample at 2-8				1000 mL	. Amber Glass;washed with nitric acid;	
38. Chloride 100 mL	37. Sulphate			100 mL		Without adding acid Store sample at 2-8°C
39. Others:	38. Chloride	3.38		100 mL	7	97 % g
	39. Others:			1 2000		

#### \*Remarks:

- 1. Individual sampling can be performed upon request
- 2. The minimum sampling time for 2019 ZDHC guideline is 6 hours with no more than one hour between discrete samples. Sampling time could be adjusted upon request.
- 3. Scope of ZDHC guideline: Parameter 1-9, 12, 14-17, 19-26, 28, 29, 31-35

Scope of synthetic leather industry: Parameter 1-9, 12, 14-21, 23-26, 28, 30, 31, 33, 34, 37, 38

Scope of MMCF: Parameter 5, 15, 17, 19-21, 23 - 26, 28, 33-36

- Free primary aromatic amine, pesticides, nitrosamine and formatidehyde are not in the scope of ZDHC Guidline, they are tested upon request.
- Refer to CPSDAN-030019-STIP01, loadions with those CPSD test capability inside TCD matrix can perform the combined test.
   Refer to CPSDAN-030570-MTHD for additional pretreatment of sulfide if only dissolved sulfide is required to be tested.
- Refer to CPSD-AN-00613-MTHD for preparation of field blank for specific parameters.

ecorded by:	ma-masud	forma		Date:	1. 2 2_
	Full name:		AT .		
comment from factory	p e	· · · · · · · · · · · · · · · · · · ·			
/				 	

container(s) and without any observation in leakage. Sample(s) collected by Bureau Veritas is/are sto

Signatory of Factory Representative;

CPSD-AN-00613-DATA 04-FIELD DATA RECORD ZDHC SAMPLING-V1

Date: 0,600

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14. Organotin Compounds

16. PFCs (Remark 6)

15. VOC & Halogenated Solvents (Remark 6)

CPSD-AN-00613-DATA 04-FIELD DATA RECORD ZDHC SAMPLING-V16

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

CPSD-AN-00613-DATA 04
Issue Date:
Version No.: 16
Business Line: Analytical

Manherma								Business Li	ne: Analytical	L
General Data			1	Paral	7 / 6		. 1			41-1-1
aboratory Sample Num	ber:		1	6881	) (03	-024	16			
Client Name:			/					9-10 6-	- 10	
Field Contact Person:		Abu-S	red		Phone No: 6	1718-57	? 6CR 0CI		-	
Project (Facility Name a	nd Address):	W.W Die	elna Do	intina d				ripur. go	eimult.	
Sampling Location / Des		ETP- C		11 mg 24	U- 8JV VI 7 19	" ALTO PAIN	a. B.14.00	100111	and and	
Sample Identification:	8	Zero discharge		an			- 10	*****	•	
ample Type:		Composite Samp			as appropriate)			,		
ame of Sampler:		md. Ma	2 2				24-41	2 2	-	
ischarge mode:					River, Sea. Stream	) OR Indirect die	scharge to sewage	frealment plant	Labord	et T
ate of collection:	# 0 %	12.04.2	····			, orrandordi.	gu to suttaga			
actory Type:	****	Dyeing / Printing		lehina / Othere (	nlages enecify):		2 (Mars 1)		to a	13
downy Type.	72 18	*Note: It would be			proces specify),				d .	
Nald Data 5	ator			nes diena					8	
ield Data for Wastewa rrival Time:	net	11.20		Departure Time	<del></del>	17:15		1		
ield Parameters	- N	pH: <b>Z·1</b>		Temp: 32	30		ddish	Flow rate :	(volume/min)	1
Control No. of field equi	pment			- J					(	1
actory with effluent trea		1	Y	es		-	. 2 .	No		1
			Incoming water			li .	- <del></del>		******	1
ample matrix:		-	Wastewater bef		51		11:		5000	
and the same				er treatment – water at discharge point						-
ampler container numb		24	vvastewater atte	i deadlient – wi	ater at discriarge	j j	1			1
ampler container name	) o i		Ź			<del>                                     </del>		-		-
	10	1 1		3	4	5	6	7	8	1
tecording time	ID Time	W.40	12.40	13.40	16-40	15.46	14.60			1
u.	Time	3.1	6.3	6.8	3.2		3.2	<u> </u>	-	1
H:				100 000	33.4	32.6	-	-		-
'emp (°C) :	).	33.7	32.1	32.3 Reddish	Reddish	Reddish	21.8 Reddish	ļ		1
Color (visual estimation	m³/h	Redish	Reddish 165		196					1
Flow rate (volume/time)	myn	155	165	175		184	173	-		Į
Volume collected, mL	1 2000 Pro 1	162724	30: 25 0: 967	167724	167×24	an t		<u> </u>	J.	1
Fotal volume collected	ML	24048	Remark: 10tal \	roidite collected	must be greater	unan total of san	nple size required		······	1
Analysis Required and	Preservation Method	· ·			7 100		1			,
Tests (ZDHC	MRSL Parameters)	Test required (v)	Total of sample size		Type of contain	er	P	reservation meth	nod	
	1. Phthalate	/		92 37 38	(a)			*:		
Combined test	2. Chlorobenzenes, Chlorotoluene & PAH	~	1000 mL total	-		55	17		×	ļ
Individual test (Remark 4)	3. SCCPs	~	or 1000 mL each							
,	4. APS	<b>-</b>	1							
5. APEOs	a	~	100 mL			9 4				
3. Chlorophenols & Cre	esols	~	100 mL	<					ı.	
. Flame retardant		~	500 mL					Without adding ac	id ·	
5. Dyes	* *************************************	~	10 mL	Amber	Glass,washed with	nitric acid,	1 3	Store sample at 2-8	°C	
9. Glycol		~	50 mL	40			100			
10. *Pesticides		25	1000 mL		2					1
11, *Nitrosamine	- 10 10	×	10 mL							
12. Banned Azodyes	99727800	_	2000 mL							
13. *Free primary aron	natic amines	×	500 mL				69			1

500 mL

10 mL

2 mL

PE, washed with pesticide grade Acetone Fill to full container without air gap; acidify to pH 2 with
HCl and store sample at 2-9°C
Without adding acid
Store sample at 2-8°C



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

CPSD-AN-00613-DATA 04 Issue Date: Version No.: 16

Tests (Conve	ntional Parameters)	Test required (v)	Total of sample size	Type of container	Preservation method
Combined test or 17. Total suspened solids (TSS)		<u> </u>	2000 mL total		et 10
Individual test (Remark 4)	18. Total dissolved solids (TDS)	本	2000 mL each	Amber Glass, washed with nitric acid,	Without adding acid Store sample at 2-8°C
3. 5-day Biochemical	Oxygen Demand (BOD5)	~	1000 mL	18	
). Colour .		~	100 ml.		
1. Heavy Metals exce	pt Cr(VI) & Total-P (Remark	~	9 mL	PE, washed with nitric acid	Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C
2. Cyanide		~	500 mL	Amber Glass, washed with pesticide grade acetone	Adjust pH 12 with 50% NaOH, add 0.05 ml of 10% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , and store sample at 2-8°C
3. Cr(VI)		~	95 mL		Filter by 0.45µm filter in field, filt to full container without air gap; adjust pH to 9.0-9.5 by adding ammonium buffer. Store sample at 2-8°C
4. Chemical oxygen o	demand (COD)	1	150 mL		
5. Phenois		_	500 mL	Amber Glass; washed with nitric acid	Acidify to pH 2 with H <sub>2</sub> SO <sub>4</sub> Store sample at 2-8°C
6. Oil and Grease & *	Total Hydrocarbon	-	1000 mL		
7. *Formaldehyde		×	25 mL		Fill to full container without air gap; acidify to pH 2 w H <sub>2</sub> SO <sub>4</sub> and store sample at 2-8°C
28. Sulfide (Remark 5	)	-	50 mL	PE, washed with postloide grade Acetone;	Fili to full container without air gap; add 2 drops of 2 zino acetate, adjust pH to 9 with 6M NaOH Stora sample at 2-8°C
29. Total Coliform (Re	emark 6)	-	125 mL	PE, clean, sterile,	Add 0.1 ml of 10% Na2 <sub>6</sub> 2O <sub>3</sub> keep in dark
30 E.coli (Remark 6)	e e e e e e e e e e e e e e e e e e e	*	125 mL	non-reactive	Store sample at 2-8°C
31. Persistent form		-	N.A.	Foam higher than 45 cm (visi	ual estimation): Yes / No
32. Sulfite		~	100 mL	Amber Glass, washed with pesticide grade acatone	Add 1mL of 2.5% EDTA Store sample at 2-8°C
33, Total-N		~	100 mL		Acidify to pH 2 with H <sub>2</sub> SO <sub>4</sub>
34. Ammonium-N		-	500 mL		Store sample at 2-8°C
35. Adsorbable organ	nically bound halogens (AOX)	-	100 mL	Amber Glass; washed with nitric scid;	Acidify to pH 2 with HNO <sub>3</sub> and store at 2-8°C
36. Acute aquatic tox Luminus Bacteria; Fi	icity: sh Egg; Daphne; Alage;		1000 mL	Ander Glass, was red with name sou;	Without adding acid
37. Sulphate	i i		100 mL		Store sample at 2-8°C
38. Chloride			100 mL		<u> </u>
39. Others:			0		

- 1. Individual sampling can be performed upon request
- 2. The minimum sampling time for 2019 ZDHC guideline is 6 hours with no more than one hour between discrete samples. Sampling time could be adjusted upon request.
- 3, Scope of ZDHC guideline: Parameter 1-9, 12, 14-17, 19-26, 28, 29, 31-35

Scope of synthetic leather industry: Parameter 1-9, 12, 14-21, 23-26, 28, 30, 31, 33, 34, 37, 38

Scope of MMCF: Parameter 5, 15, 17, 19-21, 23 - 26, 28, 33-36

Free primary aromatic amine, posticides, nitrosamine and formaldehyde are not in the scope of ZDHC Guidline, they are tested upon request.

- 4. Refer to CPSD-AN-G00019-STIP01, loadlions with those CPSD test capability inside TCD matrix can perform the combined test. 5. Refer to CPSD-AN-000570-MTHD for additional pretreatment of sulfide if only dissolved sulfide is required to be tested.

6. Refer to CPSD-AN-00613-MTHD for preparation of field blank for specific parameters.

Md · Masus		8 8		· .
2		, s		*
any observation in leakag	eted the stated same. Sample(s) colle	npling activity at captioned cled by Bureau Veritas is/a	are stored in portable freezer/fridge th	is/are collected in desinated nat is maintained in 1-6°C
	reau Veritas has comple	reau Veritas has completed the stated sen ny observation in leakage. Sample(s) colle	reau Veritas has completed the stated sampling activity at captioned ny observation in leakage. Sample(s) collected by Bureau Veritas is h	reau Veritas has completed the stated sempling activity at captioned date, time and location. All sample(s) ny observation in leakage. Sample(s) collected by Bureau Veritas is/are stored in portable freezer / fridge the

APPENDIX D – Limitation Value of Legal Requirements

Not Applicable

**END** 

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