

TEST REPORT

Technical Report: (6822)081-0453 April 05, 2022

Date Received: March 21, 2022 Page 1 of 22

Factory Company Name: Panorama Washing Co. Ltd.

Factory Address: Shee-127, Faizur Rahman Sarak, Islampur Road, Gazipur, 1702, 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: March 21, 2022

Wastewater Discharge to: Reused + Government Drain

Yes

Not Applicable

Not Applicable

Not Applicable

Not Applicable

Not Applicable

Foundational

On-Site Effluent Treatment Plant

(ETP):

Discharge Type: Direct Discharge

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

Off-site ETP address (if

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:

Category:

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

I001) Lt. azure color liquid - Raw Wastewater I002) Colorless liquid – Treated Wastewater

March 22, 2022 To April 05, 2022

Parameters exceeded maximum

holding time:

Not Applicable

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

This report is governed by, and incorporates by reference, CPS Conditions of Service as posted at the date of issuance of this report at http://www.bureauveritas.com/home/about-us/curv-business/cps/about-us/eurs-conditions/and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute you unqualified acceptance of the completeness of this report, the



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REMARK

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

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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

MD. RASHEDUL HAQUE MANAGER, RSL OPERATIONS

 $CONSUMER\ PRODUCTS\ SERVICES\ (BANGLADESH)\ LTD.$



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Executive Summary

| 1A) Conventional Parameters | I001 | 1002 |
|--|------|------|
| Temperature | | |
| TSS | | |
| COD | | |
| Total-N | | |
| pH Value | | |
| Color [m ⁻¹] (436nm; 525nm; 620nm) | | |
| BOD ₅ | | |
| 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 | I002 |
|--|------|------|
| 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:

- $\begin{tabular}{ll} \hline & & Meet Foundational Limit / Meet discharge license criteria \\ \hline \end{tabular}$
- - 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 | 27.4 (Progressive) | 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 | 27 (Foundational) | 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 | 112 (Foundational) | 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 | 14.2 (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 | 22.8 |
| pH value of sample - | | 7.2 (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 : ISO 7887: 2011(E), B

| Tested Item(s) | Result | Unit | Conclusion |
|----------------|---------------------------------|-----------------|------------|
| I002 | 6.7; 4.7; 2.7 (Foundational) | 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 (BOD₅)

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

| Ī | Tested Item(s) | Result | Unit | Conclusion |
|---|----------------|----------------------|------|------------|
| | I002 | 28 (Foundational) | 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-NH₃ – B & F 22nd Edition 2012

| Tested Item(s) | Result | Unit | Conclusion |
|----------------|------------------------|------|------------|
| I002 | 0.39 (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 22nd Edition -4500-P.E (2012)

| ĺ | Tested Item(s) | Result | Unit | Conclusion |
|---|----------------|------------------------|------|------------|
| | 1002 | 0.72 (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 | 0.74 (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 |
|----------------|----------------------|------|------------|
| I002 | 1.9 (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 | 0.002 (Progressive) | 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 |
|----------------|----------------|------------|------------|
| 1002 | 296 | Bacteria / | DATA |
| I002 | (Foundational) | 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 22nd 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

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-S²-D

| Tested Item(s) | Result | Unit | Conclusion |
|----------------|------------------------|------|------------|
| I002 | <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-SO₃²⁻ (2012)

| Tested Item(s) | Result | Unit | Conclusion |
|----------------|----------------------|------|------------|
| I002 | 0.5 (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



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1B) Conventional Parameters - METALS

| Heavy Metals | I001 (mg/L) | I002 (mg/L) |
|--------------------------------|----------------|----------------|
| Antimony(Sb) | | |
| Foundational Limit: 0.1 mg/L; | 0.048 | ND |
| Progressive Limit: 0.05 mg/L; | (Progressive) | (Aspirational) |
| Aspirational Limit: 0.01 mg/L | | |
| Chromium(Cr), total | | |
| Foundational Limit: 0.2 mg/L; | 0.004 | ND |
| 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; | 0.008 | 0.005 |
| Progressive Limit: 0.5 mg/L; | (Aspirational) | (Aspirational) |
| Aspirational Limit: 0.25 mg/L | | |
| Nickel (Ni) | | |
| Foundational Limit:.0.2 mg/L; | 0.004 | 0.001 |
| Progressive Limit: 0.1 mg/L; | (Aspirational) | (Aspirational) |
| Aspirational Limit: 0.05 mg/L | | |
| Silver (Ag) | | |
| Foundational Limit: 0.1 mg/L; | ND | ND |
| Progressive Limit: 0.05 mg/L; | (Aspirational) | (Aspirational) |
| Aspirational Limit: 0.005 mg/L | | |
| Zinc(Zn) | | |
| Foundational Limit: 5 mg/L; | 0.573 | 0.047 |
| Progressive Limit: 1 mg/L; | (Progressive) | (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) | 115 | N.D. |
| Foundational Limit: 0.05 mg/L; | ND | ND |
| Progressive Limit: 0.005 mg/L; | (Aspirational) | (Aspirational) |
| Aspirational Limit: 0.001 mg/L | | |
| Lead(Pb) | ND | ND |
| Foundational Limit: 0.1 mg/L; | ND | ND |
| Progressive Limit: 0.05 mg/L; | (Aspirational) | (Aspirational) |
| Aspirational Limit: 0.01 mg/L | | |
| Mercury (Hg) | 115 | N.D. |
| 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) | $I002 (\mu g/L)$ |
|---|-------------|------------------|
| 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 Surrounding Environment (GPS Location: N 24° 0' 48.633"; E 90° 23' 4.563")



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 Surrounding Environment (GPS Location: N 24° 0' 48.633"; E 90° 23' 4.563")



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 | 111 20 1 10 |
| | 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 | |
| an an . | 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 GC/MS |
| | 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 | |
| | 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 | |



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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 |
| | Pentachlorotoluene | 877-11-2 | 0.2 | 0.2 | |
| | 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 | Liquid Extraction |
| Carcionogenic or Equivalent Concern | C.I. Acid Red 26 | 3761-53-3 | 500 | 10 | |
| | | | | | LC/MS |



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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. 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 | |
| | 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 | |
| (sensitizing) | 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 | - |
| | Disperse Orange 3 | 730-40-5 | 50 | 2 | - |
| | Disperse Blue 35 Tris(2-chloroethyl) | 56524-77-7 | 50 | 1 | |
| | phosphate (TCEP) Decabromodiphenyl ether | 1163-19-5 | 5 | 1 | |
| | (DecaBDE) Tris(2,3-dibromopropyl) | 126-72-7 | 5 | 1 | |
| | phosphate (TRIS/TDBPP) 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 |
| Ketaruants | 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 | |



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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 |
| | Tris(1,3-dichloro- isopropyl) phosphate (TDCP) | 13674-87-8 | 5 | 1 | |
| | 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 | |
| 2H. Glycols | Ethylene glycol dimethyl ether | 110-71-4 | 50 | 10 | US EPA 8270 Liquid Extraction |
| 211. 01/015 | 2-methoxyethanol | 109-86-4 | 50 | 10 | LC/MS |
| | 2-methoxyethylacetate | 110-49-6 | 50 | 10 | 4 |
| | 2-methoxypropylacetate | 70657-70-4 | 50 | 10 | 4 |
| | Triethylene glycol dimethyl ether | 112-49-2 | 50 | 10 | |
| | 1,2-Dichloroethane | 107-06-2 | 1 | 2 | USEPA 8260B |
| 2I. Halogenated | Methylene Chloride | 75-09-2 | 1 | 2 | Headspace GC/MS or |
| Solvents | Trichloroethylene | 79-01-6 | 1 | 2 | Purgeand-Trap-GC/MS |
| | Tetrachloroethylene | 127-18-4 | 1 | 2 | Turgeand Trup Germs |
| | Mono-, di- and tri- methyltin derivatives | Multiple | 0.01 | 0.2 | |
| 2J. Organotin Compounds | Mono-, di- and tri-butyltin derivatives | Multiple | 0.01 | 0.2 | ISO 17353 Derivatisation with |
| | Mono-, di- and tri-phenyltin derivatives | Multiple | 0.01 | 0.2 | NaB(C2H5) GC/MS |
| | Mono-, di- and tri-octyltin derivatives | Multiple | 0.01 | 0.2 | |
| | Perfluorooctanesulfonic acid (PFOS) | 1763-23-1 | 0.01 | 0.10 | NaB(C2H5) GC/MS DIN 38407-42 |
| OIV D. Cl | Perfluoro-n-octanoic acid (PFOA) | 335-67-1 | 0.01 | 0.10 | (modified) Ionic PFC: |
| 2K. Perfluorinated and Polyfluorinated | Perfluorobutanesulfonic acid (PFBS) | 29420-49-3, 29420-43-3 | 0.01 | 0.10 | Concentration or direct injection, LC/MS(-MS); |
| Chemicals (PFCs) | 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, followed by GC/MS |
| | 6:2 FTOH | 647-42-7 | 1 | 1 | Tollowed by GC/MS |
| | Di-2-ethylhexyl phthalate (DEHP) | 117-81-7 | 10 | 2 | |
| | Dimethoxyethyl phthalate (DMEP) | 117-82-8 | 10 | 2 | |
| | Di-n-octyl phthalate (DNOP) | 117-84-0 | 10 | 2 | |
| 2L. Phthalates (including all other | Di-iso-decyl phthalate (DIDP) | 26761-40-0 | 10 | 2 | US EPA 8270D, ISO 18856 |
| esthers of phthalic acid) | Di-iso-nonyl phthalate (DINP) | 28553-12-0 | 10 | 2 | Dichloromethane extraction GC/MS |
| | 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 | |



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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 |
| | Diethyl phthalate (DEP) | 84-66-2 | 10 | 2 | |
| | (DPRP) | 131-16-8 | 10 | 2 | |
| | (DIBP) | 84-69-5 | 10 | 2 | |
| | (DCHP) | 84-61-7 | 10 | 2 | |
| | (DIOP) | 27554-26-3 | 10 | 2 | |
| | acid, di-C7-11-branched and linearalkyl esters (DHNUP) | 68515-42-4 | 10 | 2 | |
| | 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 | |
| | | 191-24-2 | 1 | 0.2 | |
| | | 192-97-2 | 1 | 0.2 | |
| | | 193-39-5 | 1 | 0.2 | |
| | Benzo[j]fluoranthene | 205-82-3 | 1 | 0.2 | |
| 2M. Poly Aromatic | Benzo[b]fluoranthene | 205-99-2 | 1 | 0.2 | DIN 38407-39 |
| Hydrocarbons | Fluoranthene | 206-44-0 | 1 | 0.2 | Solvent extraction |
| (PaHs) | Benzo[k]fluoranthene | 207-08-9 | 1 | 0.2 | GC/MS |
| (Falls) | Acenaphthylene | 208-96-8 | 1 | 0.2 | GC/MS |
| | Chrysene | 218-01-9 | 1 | 0.2 | |
| | Dibenz[a,h]anthracene | 53-70-3 | 1 | 0.2 |] |
| | | 56-55-3 | 1 | 0.2 | |
| | | 83-32-9 | 1 | 0.2 | |
| | Phenanthrene | 85-01-8 | 1 | 0.2 | |
| | Fluorene | 86-73-7 | 1 | 0.2 | 1 |
| | Naphthalene | 91-20-3 | 1 | 0.2 | 1 |
| | Benzene | 71-43-2 | 1 | 2 | |
| 2N. Volatile | Xylene | 1330-20-7 | 1 | 2 | ISO 11423-1 |
| Organic Compound | | 95-48-7 | 1 | 2 | Headspace- or Purge- |
| (VOCs) | _ | 106-44-5 | 1 | 2 | and-Trap-GC/MS |
| / | Diethyl phthalate (DEP) Di-n-propyl phthalate (DPRP) Di-iso-butyl phthalate (DIBP) Di-cyclohexyl phthalate (DCHP) Di-iso-octyl phthalate (DIOP) 1,2-benzenedicarboxylic acid, di-C7-11-branched and linearalkyl esters (DHNUP) 1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) Benzo[a]pyrene (BaP) Anthracene Pyrene 129-00 Benzo[ghi]perylene Benzo[b]fluoranthene Benzo[b]fluoranthene Dibenz[a,h]anthracene Benzo[a]anthracene Dibenz[a,h]anthracene Benzo[a]anthracene | 108-39-4 | 1 | 2 | r |
| | | _ | N/A | N/A | A poly, the eter dend |
| | TSS | _ | N/A | N/A | Apply the standard methods that best apply |
| | | | N/A | N/A | to the region (ISO, EU, |
| | | | N/A | N/A | US, China), please refer |
| | pH | 1_ | N/A | N/A | to ZDHC Wastewater |
| 1A. Conventional | Color [m ⁻¹] (436nm; | | N/A | N/A | Guidelines for more details on the testing |
| Parameters | | | N/A | N/A | method and the levels |
| - | | | N/A | N/A | (Foundational, |
| - | | | N/A | N/A | Progressive, and |
| | i otai-i | | | | |
| | ΛοΥ | _ | NT/A | NI/A | Aspirational). |
| | AoX Oil and Greece | | N/A N/A | N/A N/A | Aspirational). |



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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 |
| | Coliform(bacteria/100ml) | _ | N/A | N/A | reference to APHA |
| | 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 levels (Foundational, |
| METALS | Cadmium(Cd) | 7440-43-9 | 0.0001 | 2 | Progressive, and |
| | Chromium VI(CrVI) | 18540-29-9 | 0.001 | 2 | Aspirational). |
| | Lead(Pb) | 7439-92-1 | 0.001 | 2 | rispirationary. |
| | 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)081-0453] 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

| 1. 1/2/EF-/ | ECORD ON | ZERO DIS | CHARGE S | AMPLE | | Issue Date: | | | | |
|--|--|---|---|--------------------------|-------------------|----------------------|-------------------------|-----------------------------------|-------------------------|--|
| 00000000000000000000000000000000000000 | | (COM | OSITE / INI | DIVIDUAL S | AMPLING) | | | Version No | | |
| RAZINESA SA | | | | | | | | Business L | .ine: Analytical | |
| General Data aboratory Sample Nur | nber | | (6gr | 2)841 | -04 | 15/2 | | | | |
| lient Name: | 1707 | Self (6927) 181 -0411 2 | | | | | | | | |
| field Contact Person: | | | | | | | | | | |
| roject (Facility Name a | and Address | Md. Harun-On-Rashid Phone No. 01714676579 | | | | | | | | |
| ampling Location / De | | Panorama washing Co. Udd. Nawzorz gazipurz. | | | | | | | | |
| ample Identification | | to the life his home with the latter of the | with sampling pla | 10 | | _ | | | = | |
| iample Type | | Violent Control of Control | ple / Grab sampl | AC 3.5 | ar appropriate) | | | | _ | |
| lame of Sampler | | | DATE OF THE PARTY | Carlo and the control of | аз арргирпака) | _ | | | - | |
| lischarge mode | | | ised Ran | | Divas Con Cirone | VOD Instant dis | charas to sussans | traatment plant | = | |
| ate of collection | | PARTY SACRE II | were a | eury destination. | liver, dea, dueam | / Ork Wildis Got Ula | analys to remage | a data to a plant | = 0 | |
| | | 21.03. | | Tables / Others / | | | | | - | |
| actory Type | | | g / Washing / Fin selected more thi | | please specify): | | | | _ | |
| and the first of the state of t | | Hote. It would be | selected more thi | an one | | | | | | |
| ield Data for Wastew Arrival Time: | ater | 11-05 | | Departure Time | | 17.10 | | 1 | | |
| ield Parameters | | pH: 47-4 | Departure Time: | | | | azure | Flow rate : | (volume/min) | |
| | inment | Jan. 4717 | 7.0.1 | Temp: ዺヌ・と | | with the | CLUIC | unitone | (resolution) | |
| Control No. of field equi | | | | os. | | | | No | | |
| actory with effluent tre | atment plant: | - | | 'es | | | | MV. | | |
| | | | Incoming water | | | | | | | |
| lample matrix | | | Wastewater bel | | | CC /SVC 11 | | | | |
| | posse | 1.0 | Wastewater afti | er treatment – wa | iter at discharge | point | | 1 | | |
| Sampler container num | ber | 12 | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| ecording time | ID | | | | | | | | | |
| 19/ | Time | 11:25 | 12:25 | 13.25 | 14.26 | 15.26 | 16.25 | | | |
| H | | 7.1 | 6.5 | 6.3 | 6.3 | 6.2 | 6.2 | | | |
| emp (°C) | | 27.4 | 28· i | 28.3 | 27.8 | 29.4 | 28.4 | | | |
| Color (visual estimation | 1) | U azure | L azuze | L. azure | L. OZUTE | Lazure | L.azuice | | | |
| low rate (volume/time | m3/h | | | | | | | | | |
| Volume collected, mL | | 167712 | 167712 | 167412 | 167412 | 167×12 | 167×12 | | | |
| Total volume collected | mL | 12024 | Remark: Total | volume collected | must be greater | than total of sam | ple size requires | d | | |
| | ¥2000000000000000000000000000000000000 | 1/202 | in . | | | | | | | |
| | d Preservation Method | Test required | Total of | | in to the second | | | N 20 | 022000 | |
| Tests (ZDHC | MRSL Parameters) | (v) | sample size | Type of container | | | Preservation method | | | |
| | 1 | | adilipio aizo | | | | | | | |
| | 1. Phthalate | | sample size | | | | | | | |
| Combined test | 2. Chlorobenzenes, | ~ | | | | | | | | |
| or | Chlorobenzenes, Chlorotoluene & PAH | ~ | 1000 mL total | | | 2 | | 8 | | |
| | 2. Chlorobenzenes, | ~ | 1000 mL total | | | 2 | | 8 | | |
| or Individual test | Chlorobenzenes, Chlorotoluene & PAH | 1 | 1000 mL total | | | a a | | | | |
| or Individual test (Remark 4) | Chlorobenzenes, Chlorotoluene & PAH SCCPs | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 1000 mL total | | | a a | | | | |
| or Individual test (Remark 4) 5. APEOs | 2 Chlorobenzenes, Chlorotoluene & PAH 3 SCCPs 4 APS | 1 1 1 1 | 1000 mL total or 1000 mL each | | | | | | | |
| or Individual (est (Remark 4) 5. APEOs 6. Chlorophenols & Cr | 2 Chlorobenzenes, Chlorotoluene & PAH 3 SCCPs 4 APS | 1 | 1000 mL total or 1000 mL each 100 mL | | | | | 8 | | |
| or Individual (est (Romark 4) 5. APEOs 6. Chlorophenols & Cr. 7. Flame retardant | 2 Chlorobenzenes, Chlorotoluene & PAH 3 SCCPs 4 APS | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 1000 mL total or 1000 mL each 100 mL 100 mL | | | al al | | Without adding Store semple at | | |
| or individual test (Remark 4) 5. APEOs 6. Chlorophenols & Cr. 7. Flame retardart 8. Dyes | 2 Chlorobenzenes, Chlorotoluene & PAH 3 SCCPs 4 APS | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 1000 mL total or 1000 mL each 100 mL 100 mL 500 mL | | Glass,washed with | nitric acid, | | | | |
| or individual test (Remark 4) 5. APEOs 6. Chlorophenols & Cr. 7. Flame retardart 8. Dyes | 2 Chlorobenzenes, Chlorotoluene & PAH 3 SCCPs 4 APS | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 1000 mL total or 1000 mL each 100 mL 100 mL | | | nitric acid. | | | | |
| or Individual test (Remark 4) 5. APEOs 6. Chlorophenois & Cr. 7. Flame retardant 8. Dyes 9. Glycol | 2 Chlorobenzenes, Chlorotoluene & PAH 3 SCCPs 4 APS | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 1000 mL total or 1000 mL each 100 mL 100 mL 500 mL | | | nitric acid, | | | | |
| or Individual test (Remark 4) 5. APEOs 6. Chlorophenols & Cr. 7. Flame retardant 8. Dyes 9. Glycol 10. *Pesticides | 2 Chlorobenzenes, Chlorotoluene & PAH 3 SCCPs 4 APS | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | 1000 mL total or 1000 mL each 100 mL 100 mL 100 mL 100 mL 500 mL 500 mL 50 mL | | | nitria acid, | | | | |
| or Individual test (Remark 4) 5. APEOs 6. Chlorophenols & Cr. 7. Flame retardart. 8. Dyes | 2 Chlorobenzenes, Chlorotoluene & PAH 3 SCCPs 4 APS | | 1000 mL total or 1000 mL each 100 mL 100 mL 100 mL 100 mL 500 mL 100 mL 100 mL 100 mL | | | .nitria acid, | | | | |
| or Individual test (Remark 4) 5. APEOs 6. Chlorophenols & Cr. 7. Flame retardant 8. Dyes 9. Glycol 10. "Pesticides 11. "Nitrosamine | Chlorobenzenes, Chloroteluene & PAH SCCPs APS | | 1000 mL total or 1000 mL each 100 mL 100 mL 100 mL 500 mL 100 mL 100 mL 100 mL 100 mL 100 mL | | | ntric acid, | | | | |
| or Individual test (Remark 4) 5. APEOs 6. Chlorophenols & Cr. 7. Flame retardant 8. Dyes 9. Glycol 10. *Pesticides 11. *Nitrosamine 12. Banned Azcdyes | 2. Chlorobenzenes, Chlorotoluene & PAH 3. SCCPs 4. APS ssols seatic amines | × | 1000 mL total or 1000 mL each 100 mL 100 mL 500 mL 10 mL 1000 mL 1000 mL 1000 mL 1000 mL 1000 mL 1000 mL | | | ntric acid. | | | | |
| or individual test (Remark 4) 5. APEOs 6. Chlorophenots & Cr. 7. Flame retardant 8. Dyes 9. Glycol 10. *Pesticides 11. *Nitrosamine 12. Banned Azodyes 13. *Free primary aron 14. Organotin Composite | 2. Chlorobenzenes, Chlorotoluene & PAH 3. SCCPs 4. APS ssols seatic amines | × | 1000 mL total or 1000 mL each 1000 mL 500 mL 500 mL 1000 mL 500 mL 1000 mL 1000 mL 1000 mL 5000 mL 5000 mL 5000 mL | | | nitric acid, | Fill to full contain HC | Store semple of a | yp; aciddy to pH 2 with | |



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

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

| Tests (Conve | ntional Parameters) | Test required (Y) | Total of sample size | Type of container | Preservation method | |
|---|------------------------------------|-------------------|----------------------|--|---|--|
| Combined test or | 17 Total suspened solids (TSS) | | 2000 mt. total | | | |
| Individual test (Remark 4) | 18 Total dissolved solids (TDS) | | 2000 mL each | Amber Glass, washed with nifric acid, | Without adding acid Store sample at 2-8°C | |
| 3. 5-day Biochemical | Oxygen Demand (BOD5) | | 1000 mL | | | |
| 3. Colour | | 1 | 100 mL | | | |
| | pt Cr(VI) & Total-P (Remark | | 9 mL | PE, washed with nitric sold | Acidify to pH 2 with HNO ₃ and store at 2-8°C Adjust pH 12 with 50% NaOH, add 0.05 ml of 10% | |
| 2. Cyanide | | V | 500 mL | Amber Glass, washed with pesticide grade acatone | Na ₂ S ₂ O ₃ , and store sample at 2-8°C | |
| 3. Gr(VI) | | ~ | 95 mL | | Filter by 0.45µm filter in field, fill to full container without air gep, adjust pH to 9.0-9.5 by adding ammonium buffer. Store sample at 2-8°C | |
| 4. Chemical oxygen | demand (COD) | | 150 mL | | Acidity to pH 2 with H ₂ 9O ₄ | |
| 5. Phenois | | | 500 mL | Amber Glass; washed with nitric ecid | Store sample at 2-8°C | |
| 26. Oil and Grease & Total Hydrocarbon | | | 1000 mL | | Fill to full container without air gap, acidity to pH 2 | |
| 27 *Formaldehyde | | × | 25 mL | | H ₂ SO ₄ and store sample at 2-8°C | |
| 28. Sulfide (Remark 5) 29. Total Coliform (Remark 5) | | 1 | 50 mL | PE, washed with pesticide grade Acetone; | Fill to full container without air gap, add 2 drops of 2 zinc acetate, adjust pH to 9 with 6M NaOH Store sumple at 2-6°C | |
| | | | 125 mL | PE, clean, stenie, | Add 0.1 ml of 1014 Na2 ₂ 2O ₃ keep in dark Store sample at 2-8 ⁴ C | |
| 30.E.coli (Remark 6) | | | 125 mL | | CVS(CSCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | |
| 31. Persistent foam | | | N.A. | Feam higher than 45 cm (vis | unit estimation): Yes / No. | |
| 32 Sulfite | | | 100 mL | Amber Glass, washed with pesticide grade acetore | Store sample at 2-8°C | |
| 33. Total-N | | | 100 mL | | Acidify to pH 2 with H ₂ SO ₄ Store sample at 2-B*C | |
| 34. Ammonium-N | | | 500 mL | | 1 # Parties (1971) | |
| 35. Adsorbable orga | nically bound halogens (AOX) | | 100 mL | Amber Glass, weshed with nitric sold | Acidify to pH 2 with HNO ₃ and store at 2-8°C | |
| 36. Acute aquatic toxicity: Luminus Bacteria: Fish Egg; Daphne, Alage; 37. Sulphate | | | 1000 mL | Autor cause, seeme some | Without adding acid | |
| | | | 100 mL | | Store sample at 2-8°C | |
| 38 Chloride | | | 100 mL | | | |
| 39 Others: | | 1 | | | | |

*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, posticides, nitrosamine and formaldehyde are not in the scope of ZDHC Guidline, they are tested upon request.

- 4. Refer to CPSD-AN-G00019-STIP01, toactions 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.
- 5. Refer to: CPSD-AN-00613-MTHD for preparation of field blank for specific parameters.

| Recorded by | Md. Mascud Rana | Date 21.03.27 |
|--------------------|---|--|
| 110000000 | Full name: | |
| Comment from fact | tory | |
| | | |
| Acknowledgement | by factory | |
| | to at 5 years. Mostler, has completed the stated sampling activity at caption | ned date, time and location. All sample(s) is/are collected in desinated |
| container(s) and w | whout any observation in leakage. Sample(s) collected by Bureau Veritas | Islare stored in portable freezer / freezer / freezer / freezer |
| | W / | \n2\n2\n2\n2\n2\n2\n2\n2\n2\n2\n2\n2\n2\ |
| Constant of Earts | ory Representative | Date 2 |
| | OS13 DATA DE-FIFI D DATA RECORD ZDHC SAMPLING-V16 | Page 2 of |

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April 05, 2022

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15. VOC & Halogenated Solvents (Remark 6)

16 PFCs (Remark 6)

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

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

| AUGUS | | (COMPC | SITE / IND | VIDUAL SA | awir Live) | | | Business Li | ine: Analytical | |
|--|-----------------------|--|--|--------------------------------|---|-------------------|--------------------------|--|-----------------|--|
| | | | (| 600 | 7 - 60 | , . | CA | | | |
| noral Data | | | (6 | 822) | 08/ | -04 | 4,2 | | | |
| boratory Sample Number | | Self | | | | | | | | |
| ent Name. | | Md. Harun - OR - Rashid Phone No. 01714 - 676579 | | | | | | | | |
| d Contact Person | . Valence | Panorama washing Co. Ltd | | | | | | | | |
| oject (Facility Name and | | | | ng Co. 11 | 0 | | | | _ | |
| mpling Location / Desc | rippon | ETP - 00 | 7 | | | | | | | |
| mple Identification | | Composite Sample | DOCUMENT OF STILL | | e appropriate) | | | | - | |
| imple Type | | Composite Sampl | e / Grap sample | (Please delete a | s appropriate) | | | | - | |
| ame of Sampler | | ma. Masc | nd kano | | or flow Stream | LOD Indicact disc | harne to sewage t | reatment plant [| [Revse+g | |
| scharge mode | | Direct discharge to | environment (Spe | city destination: Kin | ver, ose, orreann. | Just manage and | | Section and the section of the secti | - | |
| ate of collection. | | 711-0-7 | | | | | | | - | |
| actory Type | | Dyeing / Printing | | | ease specify). | | | _ | | |
| | | *Note: It would be s | selected more than | one | | | | | | |
| eld Data for Wastewat | ter | 11.05 | | Departure Time | | 17.10 | | ĺ | | |
| rrival Time: | | O DESIGNATION OF THE PERSON OF | | Temp: 26.8 | °C | Color : Co lon | less | Flow rate : | (volume/min) | |
| eld Parameters | | pH: 7.4 | | remp. Z 6'8 | | CD (OI | | | | |
| ontrol No. of field equipment | | | ., | - | | | 1 | No | | |
| actory with effluent treatment plant: | | | Y | | | | | 200 | | |
| | | | Incoming water | | | | | | | |
| Sample matrix. | | | Wastewater before treatment Wastewater after treatment – water at discharge point | | | | | | | |
| | | | Wastewater after | r treatment – wat | ter at discharge (| point: | | | | |
| ampler container numb | er | 24 | | | | 5 | 6 | 7 | 8 | |
| | | 1 | 2 | 3 | 4 | 5 | 0 | | | |
| Recording time | ID. | 11400 | | 10105 | 111.196 | 15:25 | 16:25 | - | _ | |
| accounting of the | Time | 11:25 | 12:25 | 13:25 | 14:25 | | | | | |
| H. | | 7.4 | 6.9 | 7.1 | 6.5 | 6.8 | 7.2 | - | - | |
| emp ("C): | | 26.8 | 27.2 | 27.6 | 26.9 | 28.4 | 27.8 C. 1ess | - | + | |
| Color (visual estimation) | | Ciless | Ciless | e less | cless | e. less | 9.2 | - | | |
| low rate (volume/time) | m³/h | 9.5 | 10.3 | 11.6 | 8.4 | | 167424 | - | | |
| Volume collected, mL | | 167724 | 167724 | 167724 | 167724 | 167424 | The second second second | | | |
| Total volume collected | mL | 24048 | Remark: Total | valume collected | must be greater | than total of sar | nple size require | 1 | | |
| A malurais Baranisad and | 1 Preservation Method | | | | | | | | | |
| | MRSL Parameters) | Test required (√) | Total of sample size | Type of container Preservation | | | reservation m | nethod | | |
| | t. Phthalate | ~ | | | | | | | | |
| Combined test | 2. Chlorobenzenes, | ~ | 1000 mL total | | | | | | | |
| or Individual test | Chlorotoluene & PAH | - | or 1000 mL each | | | | | | | |
| (Remark 4) | 3. SCCPs | | 1000 till aggi | | | | | | | |
| | 4. APS | / | | | | | | | | |
| 5. APEOs | | | 100 mL | | | | 1 | | | |
| 6 Chlorophenois & Cro | esols | ~ | 100 mL | 7 | | | - | | | |
| 7. Flame retardant | siemusi | 1 | 500 mL | 1 | | | | Without adding | io acid | |
| S CONTRACTOR OF THE PARTY OF TH | | +:- | 10 mL | Amber | Glass,washed with | h nitric scid. | | Store sample a | 11.2-8°C | |
| B. Dyes | | | 110000000 | Annaer | -,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | | | |
| 9. Glycol | | ~ | 50 mL | - | | | | | | |
| 10 *Pesticides | | * | 1000 mL | _ | | | | | | |
| 11. *Nitrosamine | | × | 10 mL | | | | | | | |
| 12. Banned Azodyes | | V | 2000 mL | | | | | | | |
| 13. *Free primary aron | matic amines | × | 500 mL | | | | | | | |
| | | | 500 mL | | | | | | | |
| 14. Organotin Compo | ungs | ~ | www.mite | | | | - | | | |

10 mL

ORD ZDHC SAMPLING-V16

PE, washed with pesticide grade Acetona 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
Business Line: Analytical

| Tests (Conver | tional Parameters) | Test required (√) | Total of sample size | Type of container | Preservation method | |
|--|---|-------------------|-------------------------------------|---|--|--|
| Combined test or Individual test (Remark 4) | 17. Total suspened solids (TSS) 18. Total dissolved solids (TDS) | \ \ | 2000 mL total or 2000 mL each | Amber Glass, washed with nitric acid, | Without adding sold Store sample at 2-8°C | |
| 19. 5-day Biochenical (| Oxygen Demand (BOD5) | ~ | 1000 mL | SALES COMMENTS OF THE SALES OF | Store sample at 2-0 C | |
| 20. Colour | | | 100 mL | | | |
| 21. Heavy Metals excer 6) | cr(VI) & Total-P (Remark | ~ | 9 ml. | PE, washed with nitric acid | Acidify to pH 2 with HNO ₃ and store at 2-8°C | |
| 22. Cyanide | | ~ | 500 mL | Amber Glass, washed with pesticide grade acctone | Adjust pH 12 with 50% NaCH, add 0.05 ml of 10% Na ₂ S ₂ O ₃ , and store sample at 2-8°C | |
| 23. Cr(VI) | | ~ | 95 mL | | Filter by 0.45µm filter in field, fill to full container without air gap, adjust pH to 9.0-9.5 by adding ammonium buffer. Store sample at 2-8°C | |
| 24 Chemical oxygen d | emand (COD) | ~ | 150 mL | | | |
| 25. Phenois | | ~ | 500 mL | Amber Glass; washed with nitric acid | Acidify to pH 2 with H ₂ SO ₄ Store sample at 2-8°C | |
| 26 Oil and Grease & T | Oil and Grease & Total Hydrocarbon | | 1000 mL | | | |
| 27 *Formaldehyde 28. Sulfide (Remark 5) | | × | 25 mL | | Fill to full container without air gap; acidify to pH 2 wit H ₂ SO ₄ and store sample at 2-8°C | |
| | | ~ | 50 mL | PE, washed with pesticide - grade Acetone; | Fill to full container without air gap; add 2 drops of 28 zinc acetate, adjust pH to 9 with 6M NaOH Store sample at 2-8°C | |
| 29: Total Coliform (Ren | nark 6) | - | 125 mL | PE, clean, sterile, | Add 0.1 ml of 10% Na2 ₂ 2O ₃ keep in dark | |
| 30.E.coli (Remark 6) | | - | 125 mL | non-reactive | Store sample at 2-8°C | |
| 31. Persistent foam | | ~ | N.A. | Foam higher than 45 cm (vis | THE PROPERTY OF THE PARTY OF TH | |
| 32. Sulfite | | ~ | 100 mL | Amber Glass, washed with pesticide grade acclare | Add 1mL of 2.5% EDTA Store sample at 2-8°C | |
| 33. Total-N | | ~ | 100 mL | | Acidify to pH 2 with H ₂ SO ₄ | |
| 34. Ammanium-N | | ~ | 500 mL | | Store sample at 2-8°C | |
| 35. Adsorbable organi | cally bound halogens (AOX) | - | 100 mL | | Acidity to pH 2 with HNO ₃ and store at 2-8°C | |
| 35. Acute aquatic toxic Luminus Bacteria, Fish | | | 1000 mL | Amber Glass,washed with nitric acid; | Without adding acid | |
| 37 Sulphate | | | | 1 | Store sample at 2-8°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 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, 19-25, 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 formaldehyde are not in the scope of ZDHC Guidline, they are tested upon request.

- 4. Refer to CPSD-AN-G00019-STIP01, loactions 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
- Refer to CPSD-AN-00613-MTHD for preparation of field blank for specific parameters.

| Recorded by: | md. Masud Rana | Date: | 21.03.22 | |
|---------------------|---|---|------------------------|--------|
| | Full name: | | | |
| Comment from fact | ery | | | |
| | | | | |
| Acknowledgement | | | , / | |
| | that Bureau Veritas has completed the stated sampling activity at | | | |
| container(s) and w | ithout any observation in leakage: Sample(s) collected by Bureau | Verites is/are stored in portable freezer / fridge that | is maintained in 1-6°C | |
| | SH.V | | SW. | |
| Signatory of Factor | ry Representative. | Date: | - ' / _ | |
| CPSD-AN-0 | 0613-DATA 04-FIELD DATA RECORD ZDHC SAMPLING-V16 | | | Page 2 |

APPENDIX D - Limitation Value of Legal Requirements

Not Applicable