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SOFTLINES WASTEWATER TESTING
TEST REPORT (TEXTILES)

Number: BGDT24127767

Report Date: 27/09/2024

Factory's name	:	AARON DENIM LIMITED
Factory's address	:	SUKRAN, MIRZANAGAR, SAVAR, DHAKA-1344, BANGLADESH
Type of wastewater discharge:		Direct discharge
On-site Wastewater treatment plant:		With wastewater treatment plant
Average total industrial wastewater generated:		≥ 15m3/day
Date and time of the beginning of sampling:		17/09/2024, 10:10
Date and time of the end of sampling:		17/09/2024, 16:30
Date received sample:		17/09/2024
Testing period:		From 17/09/2024 to 27/09/2024
Arrival temperature at laboratory:		6 °C
Sample type:		
Sample / Untreated wastewater		Dark grey, composite sample at 10:10; 11:10; 12:10; 13:10; 14:10; 15:10; 16:10 Sampling location: N 23.91013, E 90.23980
Sample / Effluent		Transparent, composite sample at 10:30; 11:30; 12:30; 13:30; 14:30; 15:30; 16:30 Sampling location: N 23.90977, E 90.23981
Sample / Sludge		Grey, composite sample at 14:45 Sampling location: N 23.90972, E 90.23976
Sampling laboratory:		ITS Labtest Bangladesh Ltd.
Testing laboratory:		ITS Labtest Bangladesh Ltd.
ZDHC sampler accreditation certification number:		ZDHC-A-24-E-C001068-R3EA1-B071D
Local legal standard name[a]:		The Environment Conservation Rules, 2023; Government of the People's Republic of Bangladesh; Ministry of Environment, Forest and Climate Change
Local legal standard no.[a]:		The Environment Conservation Rules, 2023; Government of the People's Republic of Bangladesh; Ministry of Environment, Forest and Climate Change
Parameters (ZDHC WWSG V2.1, Table 2-3) exceeded local regulation:		No exceeded
Discharge permit provided:		Yes

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Tests conducted:
As requested by a brand program, for details refer to attached page(s).

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Summary of test results:

Wastewater / MRSL – Test items	Testing period	Untreated Wastewater
Alkylphenol ethoxylates / Alkylphenols (APEOs/APs)	From 18/09/2024 to 18/09/2024	ND
Anti-Microbials & Biocides	From 22/09/2024 to 23/09/2024	ND
Chlorinated Parafins	From 19/09/2024 to 20/09/2024	ND
Chlorobenzenes and Chlorotoluenes	From 22/09/2024 to 23/09/2024	ND
Chlorophenols	From 22/09/2024 to 23/09/2024	**D**
Dimethyl Formamide (DMFa) (*)	From 19/09/2024 to 20/09/2024	ND
Dyes – Carcinogenic or Equivalent Concern	From 18/09/2024 to 18/09/2024	ND
Dyes – Disperse (Allergenic)	From 18/09/2024 to 18/09/2024	ND
Dyes – Navy Blue Colourant	From 18/09/2024 to 18/09/2024	ND
Flame Retardants	From 22/09/2024 to 23/09/2024	ND
Glycols / Glycol Ethers	From 22/09/2024 to 23/09/2024	ND
Halogenated solvents	From 22/09/2024 to 23/09/2024	ND
Organotin compounds	From 22/09/2024 to 23/09/2024	ND
Other/Miscellaneous Chemicals (^)	From 18/09/2024 to 18/09/2024	ND
Perfluorinated & Polyfluorinated chemicals (PFCs)	From 18/09/2024 to 18/09/2024	ND
Phthalates (Ortho-phthalates)	From 19/09/2024 to 20/09/2024	ND
Polycyclic aromatic hydrocarbons (PAHs)	From 22/09/2024 to 23/09/2024	ND
Restricted Aromatic Amines (Cleavable from Azo- colourants)	From 19/09/2024 to 20/09/2024	ND
UV Absorbers	From 19/09/2024 to 20/09/2024	ND
Volatile Organic Compounds (VOC)	From 22/09/2024 to 23/09/2024	ND

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Wastewater / Heavy metals - Test items	Testing period	Effluent		
		Foundational	Progressive	Aspirational
Antimony	From 25/09/2024 to 25/09/2024			Meet
Chromium (VI)	From 25/09/2024 to 25/09/2024			Meet
Barium	From 25/09/2024 to 25/09/2024	Report only, refer data		
Selenium	From 25/09/2024 to 25/09/2024	Report only, refer data		
Tin	From 25/09/2024 to 25/09/2024	Report only, refer data		
Arsenic	From 25/09/2024 to 25/09/2024			Meet
Chromium (total)	From 25/09/2024 to 25/09/2024			Meet
Cobalt	From 25/09/2024 to 25/09/2024			Meet
Cadmium	From 25/09/2024 to 25/09/2024			Meet
Copper	From 25/09/2024 to 25/09/2024			Meet
Lead	From 25/09/2024 to 25/09/2024			Meet
Nickel	From 25/09/2024 to 25/09/2024			Meet
Silver	From 25/09/2024 to 25/09/2024			Meet
Zinc	From 25/09/2024 to 25/09/2024			Meet
Mercury	From 25/09/2024 to 25/09/2024			Meet

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Wastewater / Conventional parameters - Test items	Testing period	Effluent		
		Foundational	Progressive	Aspirational
pH[f]	From 17/09/2024 to 17/09/2024	Meet		
Temperature difference[f]	From 17/09/2024 to 17/09/2024			Meet
E.coli	From 17/09/2024 to 22/09/2024	Meet		
Colour	From 18/09/2024 to 18/09/2024			Meet
Persistent foam[f]	From 17/09/2024 to 17/09/2024	Meet		
Wastewater flowrate[f]	From 17/09/2024 to 17/09/2024	Report only, refer data		
Ammonium-Nitrogen	From 21/09/2024 to 21/09/2024		Meet	
AOX	From 27/09/2024 to 27/09/2024			Meet
Biochemical Oxygen Demand (BOD_5)	From 18/09/2024 to 23/09/2024			Meet
Chemical Oxygen Demand (COD)	From 20/09/2024 to 20/09/2024			Meet
Dissolved Oxygen (DO) [f]	From 17/09/2024 to 17/09/2024	Report only, refer data		
Oil & Grease	From 21/09/2024 to 21/09/2024			Meet
Total Phenols / Phenol Index	From 20/09/2024 to 20/09/2024			Meet
Total Chlorine [f]	From 17/09/2024 to 17/09/2024	Report only, refer data		
Total Dissolved Solids (TDS)	From 18/09/2024 to 18/09/2024	Report only, refer data		
Total Nitrogen	From 21/09/2024 to 21/09/2024			Meet
Total Phosphorus	From 25/09/2024 to 25/09/2024	Meet		
Total Suspended Solids (TSS)	From 18/09/2024 to 18/09/2024		Meet	

Wastewater / Anions - Test items	Testing period	Effluent		
		Foundational	Progressive	Aspirational
Chloride	From 18/09/2024 to 18/09/2024	Report only, refer data		
Cyanide, total	From 18/09/2024 to 18/09/2024			Meet
Sulfate	From 21/09/2024 to 21/09/2024	Report only, refer data		

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Sulfide	From 21/09/2024 to 21/09/2024			Meet
Sulfite	From 18/09/2024 to 18/09/2024			Meet

Sludge – Disposal Pathways
A

Sludge / Heavy Metals - Test items	Testing period	Sludge (Total)	Sludge (Leachate)
Antimony	From 25/09/2024 to 25/09/2024	Meet	
Arsenic	From 25/09/2024 to 25/09/2024	Meet	
Barium	From 25/09/2024 to 25/09/2024	Meet	
Cadmium	From 25/09/2024 to 25/09/2024	Meet	
Cobalt	From 25/09/2024 to 25/09/2024	Meet	
Copper	From 25/09/2024 to 25/09/2024	Meet	
Lead	From 25/09/2024 to 25/09/2024	Meet	
Nickel	From 25/09/2024 to 25/09/2024	Meet	
Selenium	From 25/09/2024 to 25/09/2024	Meet	
Silver	From 25/09/2024 to 25/09/2024	Meet	
Chromium (total)	From 25/09/2024 to 25/09/2024	Meet	
Zinc	From 25/09/2024 to 25/09/2024	Meet	
Chromium VI	From 25/09/2024 to 25/09/2024	Meet	
Mercury	From 25/09/2024 to 25/09/2024	Meet	

Sludge / Anion - Test items	Testing period	Sludge
Cyanide	From 18/09/2024 to 18/09/2024	Report only, refer data

Sludge / Conventional parameters - Test items	Testing period	Sludge
pH	From 18/09/2024 to 18/09/2024	Report only, refer data
% Solids	From 18/09/2024 to 18/09/2024	Report only, refer data

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Paint filter test	From 18/09/2024 to 18/09/2024	Report only, refer data
Faecal coliform	From 17/09/2024 to 21/09/2024	Report only, refer data

Sludge / MRSL - Test items	Testing period	Sludge
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers	From 18/09/2024 to 18/09/2024	Report only, refer data
Polycyclic Aromatic Hydrocarbons (PAHs)	From 22/09/2024 to 23/09/2024	Report only, refer data
Chlorotoluenes	From 22/09/2024 to 23/09/2024	Report only, refer data

Note:		
ND	=	Not detected (less than ZDHC reporting limit for MRSL parameters) / Not detected (less than lab reporting limit for other parameters)
D	=	Detected
N/A	=	Not applicable (Out of scope according to ZDHC WWSG v2.1)
NT	=	Not tested (Did not test according to applicant's request)
(T)	=	If sample temperature is greater than 8°C and less than 10°C when received from the laboratory.
(TT)	=	If sample temperature is exceeded 10°C when received from the laboratory.
@	=	Maximum holding time exceeded.
(*)	=	Sample and report for mock leather.
(^)		Borate, zinc salt would report ND when total boron or total zinc less than 100 µg/L.
[f]	=	On-site test by sampler.
[a]	=	The local legal standard name and legal standard no. is referenced to discharge permit (or contractual agree by CETP) that provided by applicant.
This report shows the test results of the environmental samples of the above factory which were collected on a specific date and time. The results of this report shall not be used for any regulatory compliance purposes.		

Authorized By
For ITS Labtest Bangladesh Ltd. [Testing - Dhaka]

Mominul Islam
Head of Analytical, Softlines

SOFTLINES WASTEWATER TESTING
TEST REPORT (TEXTILES)

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Sample / Wastewater

1. Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers

NP/OP: With reference to ASTM D7742, modified from ISO 18218 (LC-MS Analysis).
OPEO/NPEO (n>2): With reference to ASTM D7742, modified from ISO 18254 (LC-MS Analysis).

Chemical substances	CAS no.	ZDHC reporting limit (µg/L)	Untreated wastewater	Unit
Nonylphenol ethoxylates (NPEO)	9016-45-9; 26027-38-3; 37205-87-1; 68412-54-4; 127087-87-0	5	ND	µg/L
Nonylphenol (NP), mixed isomers	104-40-5; 11066-49-2; 25154-52-3; 84852-15-3	5	ND	µg/L
Octylphenol ethoxylates (OPEO)	9002-93-1; 9036-19-5; 68987-90-6	5	ND	µg/L
Octylphenol (OP), mixed isomers	140-66-9; 1806-26-4; 27193-28-8	5	ND	µg/L

2. Anti- Microbials & Biocides

OPP, Triclosan: With reference to USEPA 8270E Solvent extraction, derivatization with KOH, acetic anhydride followed by GC-MS analysis; with reference to modified from EN 17134 (GC-MS Analysis), an alternative method of solvent extraction and derivatization are included.

Permethrin: With reference to USEPA 8270E Solvent extraction, followed by GC-MS analysis; With reference to ISO 14154 without derivatization and determination by GC-MS analysis.

Chemical substances	CAS no.	ZDHC reporting limit (µg/L)	Untreated wastewater	Unit
o-Phenylphenol (+salts)	90-43-7	100	ND	µg/L
Triclosan	3380-34-5	100	ND	µg/L
Permethrin	Multiple	500	ND	µg/L

3. Chlorinated Parafins

For MCCP: With reference to analysis by ISO18219-2 with GC-MS-NCI analysis.
For SCCP: With reference to analysis by ISO18219-1 with GC-MS-NCI analysis.

Chemical substances	CAS no.	ZDHC reporting limit (µg/L)	Untreated wastewater	Unit
Medium-chain Chlorinated paraffins (MCCPs) (C14-C17)	85535-85-9	500	ND	µg/L
Short-chain Chlorinated paraffin (C10 – C13)	85535-84-8	25	ND	µg/L

4. Chlorobenzenes and Chlorotoluenes

With reference to modified from ISO 17137 (GC-MS Analysis), USEPA 8270E, Purge and Trap, Head Space, Dichloromethane extraction followed by GC-MS analysis.

Chemical substances	CAS no.	ZDHC reporting limit (µg/L)	Untreated wastewater	Unit
1,2-Dichlorobenzene	95-50-1	0.2	ND	µg/L
Other isomers of mono-, di-, tri-, tetra-, penta- and hexa- Chlorobenzene and mono-, di-, tri-, tetra- and penta-chlorotoluene	Multiple	0.2	ND	µg/L

5. Chlorophenols

With reference to US EPA 8270E solvent extraction, derivatization with KOH, acetic anhydride followed by GC-MS; with reference to modified from DIN 50009 (GC-MS Analysis), solvent extraction and derivatization are included.

Chemical substances	CAS no.	ZDHC reporting limit (µg/L)	Untreated wastewater	Unit
2-Chlorophenol	95-57-8	0.5	ND	µg/L
3-Chlorophenol	108-43-0	0.5	ND	µg/L
4-Chlorophenol	106-48-9	0.5	ND	µg/L
2,3-Dichlorophenol	576-24-9	0.5	ND	µg/L
2,4-Dichlorophenol	120-83-2	0.5	ND	µg/L
2,5-Dichlorophenol	583-78-8	0.5	ND	µg/L
2,6-Dichlorophenol	87-65-0	0.5	**44.4**	µg/L
3,4-Dichlorophenol	95-77-2	0.5	ND	µg/L
3,5- Dichlorophenol	591-35-5	0.5	ND	µg/L
2,3,4-Trichlorophenol	15950-66-0	0.5	ND	µg/L
2,3,5-Trichlorophenol	933-78-8	0.5	ND	µg/L
2,3,6-Trichlorophenol	933-75-5	0.5	ND	µg/L
2,4,5-Trichlorophenol	95-95-4	0.5	ND	µg/L
2,4,6-Trichlorophenol	88-06-2	0.5	**63.1**	µg/L
3,4,5-Trichlorophenol	609-19-8	0.5	ND	µg/L
2,3,4,5-Tetrachlorophenol	4901-51-3	0.5	ND	µg/L

2,3,4,6-Tetrachlorophenol	58-90-2	0.5	ND	µg/L
2,3,5,6-Tetrachlorophenol	935-95-5	0.5	ND	µg/L
Pentachlorophenol (PCP)	87-86-5	0.5	ND	µg/L

6. Dimethyl Formamide (DMFa)

With reference to modified from EN ISO 16189 (GC-MS Analysis), EPA 8270E with GC-MS Analysis.

Chemical substances	CAS no.	ZDHC reporting limit (µg/L)	Untreated wastewater	Unit
Dimethyl formamide; N,N-dimethylformamide (DMFa) (*)	68-12-2	1000	ND	µg/L

(*) = Sample and report for mock leather.

7. Dyes – Carcinogenic or Equivalent Concern

With reference to modified DIN 54231 (LC-MS Analysis) By Liquid extraction.

Chemical substances	CAS no.	ZDHC reporting limit (µg/L)	Untreated wastewater	Unit
Basic violet 3 with >0.1% of Michler´s Ketone	548-62-9	500	ND	µg/L
C.I. Acid Red 26	3761-53-3	500	ND	µg/L
C.I. Acid Violet 49	1694-09-3	500	ND	µg/L
C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5	500	ND	µg/L
C.I. Basic Green 4 (malachite green chloride)	569-64-2	500	ND	µg/L
C.I. Basic Green 4 (malachite green oxalate)	2437-29-8	500	ND	µg/L
C.I. Basic Green 4 (malachite green)	10309-95-2	500	ND	µg/L
C.I. Basic Red 9	569-61-9	500	ND	µg/L
C.I. Basic Violet 14	632-99-5	500	ND	µg/L
C.I. Direct Black 38	1937-37-7	500	ND	µg/L
C.I. Direct Blue 6	2602-46-2	500	ND	µg/L
C.I. Direct Red 28	573-58-0	500	ND	µg/L
C.I. Disperse Blue 1	2475-45-8	500	ND	µg/L
C.I. Disperse Blue 3	2475-46-9	500	ND	µg/L
Disperse Orange 11	82-28-0	500	ND	µg/L

8. Dyes – Disperse (Allergenic)

With reference to modified DIN 54231 (LC-MS Analysis) By Liquid extraction.

Chemical substances	CAS no.	ZDHC Reporting limit (µg/L)	Untreated wastewater	Unit
Disperse Blue 102	12222-97-8	50	ND	µg/L
Disperse Blue 106	12223-01-7	50	ND	µg/L
Disperse Blue 124	61951-51-7	50	ND	µg/L
Disperse Blue 26	3860-63-7	50	ND	µg/L
Disperse Blue 35	12222-75-2 56524-77-7	50	ND	µg/L
Disperse Blue 7	3179-90-6	50	ND	µg/L
Disperse Brown 1	23355-64-8	50	ND	µg/L
Disperse Orange 1	2581-69-3	50	ND	µg/L
Disperse Orange 3	730-40-5	50	ND	µg/L
Disperse Orange 37/59/76	13301-61-6	50	ND	µg/L
Disperse Red 1	2872-52-8	50	ND	µg/L
Disperse Red 11	2872-48-2	50	ND	µg/L
Disperse Red 17	3179-89-3	50	ND	µg/L
Disperse Yellow 1	119-15-3	50	ND	µg/L
Disperse Yellow 3	2832-40-8	50	ND	µg/L
Disperse Yellow 39	12236-29-2	50	ND	µg/L
Disperse Yellow 49	54824-37-2	50	ND	µg/L
Disperse Yellow 9	6373-73-5	50	ND	µg/L

9. Dyes – Navy Blue Colourant

With reference to modified DIN 54231 (LC-MS Analysis) By Liquid extraction.

Chemical substances	CAS no.	ZDHC Reporting limit (µg/L)	Untreated wastewater	Unit
Component 1: C39H23Cl-CrN7O12S 2Na	118685-33-9	500	ND	µg/L
Component 2: C46H-30CrN10O20S2 3Na	Not Allocated	500	ND	µg/L

10. Flame retardants

Other flame retardant substances: With reference to USEPA 8270E, modified from ISO 17881-1 (GC-MS Analysis), modified from ISO 17881-2 (GC-MS Analysis), Dichloromethane extraction GC-MS or LC-MS analysis.

Borate salt: Determined as total boron via ICP analysis.

Chemical substances	CAS no.	ZDHC reporting limit (µg/L)	Untreated wastewater	Unit
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	25	ND	µg/L
Bis(2,3-dibromopropyl) phosphate (BIS)	5412-25-9	25	ND	µg/L
Decabromodiphenyl ether (DecaBDE)	1163-19-5	25	ND	µg/L
Hexabromocyclododecane (HBCDD)	3194-55-6	25	ND	µg/L
Octabromodiphenyl ehter (OctaBDE)	32536-52-0	25	ND	µg/L
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	25	ND	µg/L
Polybromobiphenyls (PBBs)	59536-65-1	25	ND	µg/L
Tetrabromobisphenol A (TBBPA)	79-94-7	25	ND	µg/L
Tris-(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5	25	ND	µg/L
Tris(1-aziridinyl) phosphine oxide) (TEPA)	545-55-1	25	ND	µg/L
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	25	ND	µg/L
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	25	ND	µg/L
Tris(2,3-dibromopropyl) phosphate (TRIS)	126-72-7	25	ND	µg/L
Decabromobiphenyl (DecaBB)	13654-09-6	25	ND	µg/L
Dibromobiphenyls (DiBB)	Multiple	25	ND	µg/L
Octabromobiphenyls (OctaBB)	Multiple	25	ND	µg/L
Dibromopropylether	21850-44-2	25	ND	µg/L
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3	25	ND	µg/L
Hexabromodiphenyl ether (HexaBDE)	36483-60-0	25	ND	µg/L
Monobromobiphenyls (MonoBB)	Multiple	25	ND	µg/L
Monobromodiphenylethers (MonoBDEs)	Multiple	25	ND	µg/L
Nonabromobiphenyls (NonaBB)	Multiple	25	ND	µg/L
Nonabromodiphenyl ether (NonaBDE)	63936-56-1	25	ND	µg/L
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9	25	ND	µg/L
Tribromodiphenylethers (TriBDEs)	Multiple	25	ND	µg/L
Boric acid **	10043-35-3 11113-50-1	100 in Boron	ND	µg/L
Diboron trioxide **	1303-86-2	100 in Boron	ND	µg/L
Disodium octaborate **	12008-41-2	100 in Boron	ND	µg/L
Disodium tetraborate anhydrous **	1303-96-4 1330-43-4	100 in Boron	ND	µg/L
Tetraboron disodium heptaoxide, hydrate **	12267-73-1	100 in Boron	ND	µg/L

** Report total boron directly, no conversion from Boron salt.

11. Glycols / Glycol Ethers

With reference to US EPA 8270E, modified from ISO 22892 (GC-MS Analysis), Liquid extraction, GC-MS analysis.

Chemical substances	CAS no.	ZDHC Reporting limit (µg/L)	Untreated wastewater	Unit
2-ethoxyethanol	110-80-5	50	ND	µg/L
2-ethoxyethyl acetate	111-15-9	50	ND	µg/L
2-methoxyethanol	109-86-4	50	ND	µg/L
2-methoxyethylacetate	110-49-6	50	ND	µg/L
2-methoxypropylacetate	70657-70-4	50	ND	µg/L
Bis(2-methoxyethyl)-ether	111-96-6	50	ND	µg/L
Ethylene glycol dimethyl ether	110-71-4	50	ND	µg/L
Triethylene glycol dimethyl ether	112-49-2	50	ND	µg/L

12. Halogenated solvents

With reference to USEPA 8260D, Headspace GC-MS or Purge and trap GC-MS analysis.

Chemical substances	CAS no.	ZDHC Reporting limit (µg/L)	Untreated wastewater	Unit
1,2-Dichloroethane	107-06-2	1	ND	µg/L
Methylene chloride	75-09-2	1	ND	µg/L
Tetrachloroethylene	127-18-4	1	ND	µg/L
Trichloroethylene	79-01-6	1	ND	µg/L

13. Organotin compounds

With reference to modified from ISO/TS 16179 (GC-MS Analysis), ISO 17353, Derivatisation with NaB (C2H5)4, with GC-MS analysis.

Chemical substances	CAS no.	ZDHC Reporting limit µg/L)	Untreated wastewater	Unit
Dipropyltin compounds (DPT)	Multiple	0.01	ND	µg/L
Mono-, di- and tri-butyltin derivatives	Multiple	0.01	ND	µg/L
Mono, di-, and tri-methyltin derivatives	Multiple	0.01	ND	µg/L
Mono, di-, and tri-octyltin derivatives	Multiple	0.01	ND	µg/L
Mono, di-, and tri-phenyltin derivatives	Multiple	0.01	ND	µg/L
Tetrabutyltin compounds (TeBT)	Multiple	0.01	ND	µg/L
Tripropyltin Compounds (TPT)	Multiple	0.01	ND	µg/L
Tetraoctyltin compounds (TeOT)	Multiple	0.01	ND	µg/L
Tricyclohexyltin (TCyHT)	Multiple	0.01	ND	µg/L
Tetraethyltin Compounds (TeET)	Multiple	0.01	ND	µg/L

14. Other/Miscellaneous Chemicals

Others: With reference to Liquid extraction, LC-MS-MS analysis.

Borate salt: Determined as total boron and total zinc via ICP analysis.

Chemical substances	CAS no.	ZDHC Reporting limit (µg/L)	Untreated wastewater	Unit
AEEA [2-(2-aminoethylamino) ethanol]	111-41-1	500	ND	µg/L
Bisphenol A	80-05-7	10	ND	µg/L
Thiourea	62-56-6	50	ND	µg/L
Quinoline	91-22-5	50	ND	µg/L
Borate, zinc salt ^^	12767-90-7	100 in Boron & 100 in Zinc	Boron: ND Zinc: ND	µg/L

^^ = Report total boron & total zinc individually, and no conversion from boron / zinc salt.

15. Perfluorinated & polyfluorinated chemicals (PFCs)

PFCs: With reference to modified from ISO 23702-1 (LC-MS Analysis), EPA 8270 with LC-MS Analysis
FTOH: With reference to modified from ISO 23702-1 (LC-MS Analysis), EPA 8270 with LC-MS Analysis

Chemical substances	CAS no.	ZDHC Reporting limit (µg/L)	Untreated wastewater	Unit
Perfluoro octane sulfonate (PFOS) and related substances, Perfluorooctanoic acid (PFOA)	Multiple	0.01	ND	µg/L
Perfluorooctanoic acid (PFOA) related substances	Multiple	1	ND	µg/L

16. Phthalates – including all other esters of ortho-phthalic acid

With reference to USEPA 8270E, modified from ISO 14389 (GC-MS Analysis), Dichloromethane extraction GC-MS analysis.

Chemical substances	CAS no.	ZDHC Reporting limit (µg/L)	Untreated wastewater	Unit
1,2-benzenedicarboxylic acid, di-C6-8- branched alkyl esters, C7-rich (DIHP)	71888-89-6	10	ND	µg/L
1,2-benzenedicarboxylic acid, di-C7-11- branched and linear alkyl esters (DHNUP)	68515-42-4	10	ND	µg/L
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	10	ND	µg/L
Butyl benzyl phthalate (BBP)	85-68-7	10	ND	µg/L
Di-cyclohexyl phthalate DCHP)	84-61-7	10	ND	µg/L
Di-iso-decyl phthalate (DIDP)	26761-40-0	10	ND	µg/L

Di-iso-octyl phthalate (DIOP)	27554-26-3	10	ND	µg/L
Di-isobutyl phthalate (DIBP)	84-69-5	10	ND	µg/L
Di-isononyl phthalate (DINP)	28553-12-0	10	ND	µg/L
Di-n-hexyl phthalate (DnHP)	84-75-3	10	ND	µg/L
Di-n-octyl phthalate (DNOP)	117-84-0	10	ND	µg/L
Di-n-pentylphthalates	131-18-0	10	ND	µg/L
Di-n-propyl phthalate (DPRP)	131-16-8	10	ND	µg/L
Di(ethylhexyl) phthalate (DEHP)	117-81-7	10	ND	µg/L
Dibutyl phthalate (DBP)	84-74-2	10	ND	µg/L
Diethyl phthalate (DEP)	84-66-2	10	ND	µg/L
Diisopentylphthalates	605-50-5	10	ND	µg/L
Dinonyl phthalate (DNP)	84-76-4	10	ND	µg/L

17. Polycyclic aromatic hydrocarbons (PAHs)

With reference to US EPA 8270E, DIN 38407-39, solvent extraction GC-MS analysis.

Chemical substances	**CAS no.**	**ZDHC Reporting limit (µg/L)**	**Untreated wastewater**	**Unit**
Acenaphthene	83-32-9	1	ND	µg/L
Acenaphthylene	208-96-8	1	ND	µg/L
Anthracene	120-12-7	1	ND	µg/L
Benzo[a]anthracene	56-55-3	1	ND	µg/L
Benzo[a]pyrene (BaP)	50-32-8	1	ND	µg/L
Benzo[b]fluoranthene	205-99-2	1	ND	µg/L
Benzo[e]pyrene	192-97-2	1	ND	µg/L
Benzo[ghi]perylene	191-24-2	1	ND	µg/L
Benzo[j]fluoranthene	205-82-3	1	ND	µg/L
Benzo[k]fluoranthene	207-08-9	1	ND	µg/L
Chrysene	218-01-9	1	ND	µg/L
Dibenz[a,h]anthracene	53-70-3	1	ND	µg/L
Fluoranthene	206-44-0	1	ND	µg/L
Fluorene	86-73-7	1	ND	µg/L
Indeno[1,2,3-cd]pyrene	193-39-5	1	ND	µg/L
Naphthalene	91-20-3	1	ND	µg/L
Phenanthrene	85-01-8	1	ND	µg/L
Pyrene	129-00-0	1	ND	µg/L

18. Restricted Aromatic Amines (Cleavable from Azo-colourants)

With reference to reduction step with sodium dithionite, solvent extraction, EPA 8270E and ISO 14362-1, ISO 14362-3 with GC-MS analysis.

Chemical substances	CAS no.	ZDHC Reporting limit µg/L)	Untreated wastewater	Unit
2-Naphthylamine	91-59-8	0.1	ND	µg/L
2-Naphthylammoniumacetate	553-00-4	0.1	ND	µg/L
2,4-Xylidine	95-68-1	0.1	ND	µg/L
2,4,5-Trimethylaniline	137-17-7	0.1	ND	µg/L
2,4,5-Trimethylaniline hydrochloride	21436-97-5	0.1	ND	µg/L
2,6-Xylidine	87-62-7	0.1	ND	µg/L
3,3'-Dichlorobenzidine	91-94-1	0.1	ND	µg/L
3,3'-Dimethoxybenzidine	119-90-4	0.1	ND	µg/L
3,3'-Dimethylbenzidine	119-93-7	0.1	ND	µg/L
4-Aminoazobenzene	60-09-3	0.1	ND	µg/L
4-Aminodiphenyl	92-67-1	0.1	ND	µg/L
4-Chloro-o-toluidine	95-69-2	0.1	ND	µg/L
4-Chloro-o-toluidinium chloride	3165-93-3	0.1	ND	µg/L
4-Chloroaniline	106-47-8	0.1	ND	µg/L
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	39156-41-7	0.1	ND	µg/L
4-methoxy-m-phenylenediamine	615-05-4	0.1	ND	µg/L
4-methyl-m-phenylenediamine	95-80-7	0.1	ND	µg/L
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	0.1	ND	µg/L
4,4’-methylenedi-o-toluidine	838-88-0	0.1	ND	µg/L
4,4’-methylenedianiline	101-77-9	0.1	ND	µg/L
4,4'-Oxydianiline	101-80-4	0.1	ND	µg/L
4,4'-Thiodianiline	139-65-1	0.1	ND	µg/L
5-Nitro-o-toluidine	99-55-8	0.1	ND	µg/L
6-methoxy-m-toluidine	120-71-8	0.1	ND	µg/L
Benzidine	92-87-5	0.1	ND	µg/L
o-Aminoazotoluene	97-56-3	0.1	ND	µg/L
o-Anisidine	90-04-0	0.1	ND	µg/L
o-Toluidine	95-53-4	0.1	ND	µg/L

19. UV Absorbers

With reference to USEPA 8270, ISO 22032, USEPA 527, and USEPA 8321B, dichloromethane extraction GC-MS or LC-MS-MS analysis.

Chemical substances	CAS no.	ZDHC Reporting limit (µg/L)	Untreated wastewater	Unit
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec- butyl) phenol (UV-350)	36437-37-3	100	ND	µg/L
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	100	ND	µg/L
2-benzotriazol-2-yl-4,6-di-tertbutylphenol (UV-320)	3846-71-7	100	ND	µg/L
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)	3864-99-1	100	ND	µg/L

20. Volatile organic compounds (VOCs)

With reference to ISO 11423-1 Headspace or Purge and trap, GC-MS analysis.
USEPA 8260D static headspace for determination of VOC in wastewater.

Chemical substances	CAS no.	ZDHC Reporting limit (µg/L)	Untreated wastewater	Unit
Benzene	71-43-2	1	ND	µg/L
m-cresol	108-39-4	1	ND	µg/L
o-cresol	95-48-7	1	ND	µg/L
p-cresol	106-44-5	1	ND	µg/L
Xylene	1330-20-7	1	ND	µg/L
Toluene (*)	108-88-3	1	ND	µg/L

(*) = Sample and report for mock leather.

21. Heavy metals

With reference to ISO 11885, USEPA 200.8, ISO 18412, modified from EN 16711-1 (ICP-MS Analysis).

Chemical substances	Limit			Legal * Requirement	Lab Reporting limit (mg/L)	Effluent	Unit
	Foundational	Progressive	Aspirational				
Antimony	0.1 mg/L	0.05 mg/L	0.01 mg/L	-	0.01	ND	mg/L
Chromium (VI)	0.05 mg/L	0.005 mg/L	0.001 mg/L	-	0.001	ND	mg/L
Barium	Sample and report only			-	0.01	ND	mg/L
Selenium	Sample and report only			-	0.01	ND	mg/L
Tin	Sample and report only			-	0.01	ND	mg/L
Arsenic	0.05 mg/L	0.01 mg/L	0.005 mg/L	-	0.005	ND	mg/L
Chromium (total)	0.2 mg/L	0.1 mg/L	0.05 mg/L	0.5 mg/L	0.05	ND	mg/L
Cobalt	0.05 mg/L	0.02 mg/L	0.01 mg/L	0.5 mg/L	0.01	ND	mg/L
Cadmium	0.1 mg/L	0.05 mg/L	0.01 mg/L	0.02 mg/L	0.01	ND	mg/L
Copper	1 mg/L	0.5 mg/L	0.25 mg/L	-	0.25	ND	mg/L
Lead	0.1 mg/L	0.05 mg/L	0.01 mg/L	0.1 mg/L	0.01	ND	mg/L
Nickel	0.2 mg/L	0.1 mg/L	0.05 mg/L	1 mg/L	0.05	ND	mg/L
Silver	0.1 mg/L	0.05 mg/L	0.005 mg/L	-	0.005	ND	mg/L
Zinc	5.0 mg/L	1.0 mg/L	0.5 mg/L	-	0.5	ND	mg/L
Mercury	0.01 mg/L	0.005 mg/L	0.001 mg/L	-	0.001	ND	mg/L

* Regulation/Standard information for discharged wastewater as well as the limitation value (or contractual limit value agreed by CETP) for the required parameters (mandatory).

22. Conventional parameters

Parameters	Test method	Limit			Legal* Requirement	Lab Reporting limit	Effluent	Unit
		Foundational	Progressive	Aspirational				
pH	USEPA 150.1	6-9			6-9	N/A	7.5	[f]
Temperature difference	USEPA 170.1	△+15 °C	△+10 °C	△+5 °C	△+5 °C	N/A	△+2	[f] °C
E.coli	SM 9221B presumptive, confirm positive with SM9221 F or G	126 MPN/100-ml			-	25 MPN/ 100-ml	ND	MPN /100-ml
Colour (436 nm; 525 nm; 620 nm)	ISO 7887-B	7;5;3 [m^{-1}]	5;3;2 [m^{-1}]	2;1;1 [m^{-1}]	-	N/A	0.6; 0.3; 0.1	[m^{-1}]
Persistent Foam	/	No indication of Persistent foam in receiving water			-	N/A	Absent	[f]
Wastewater Flowrate	/	N/A			-	N/A	815	[f] m^3/ day
Ammonium-Nitrogen	ISO 7150 / USEPA 350.1 / SM 4500 NH3 -F	10 mg/L	1 mg/L	0.5 mg/L	-	0.5 mg/L	0.8	mg/L
AOX	ISO 9562	3 mg/L	0.5 mg/L	0.1 mg/L	-	0.1 mg/L	ND	mg/L
Biochemical Oxygen Demand (BOD_5)	USEPA 405.1 / SM 5210-B / modified SM 5210-B,D (Hach BOD)	30 mg/L	15 mg/L	8 mg/L	30 mg/L	8 mg/L	ND	mg/L
Chemical Oxygen Demand (COD)	SM 5220-D / Validated Cuvette Method	150 mg/L	80 mg/L	40 mg/L	200 mg/L	20 mg/L	ND	mg/L
Dissolved Oxygen (DO)	EPA 360.1 / SM 4500-O-G	Sample and report only			-	N/A	6.6	[f] mg/L
Oil and grease	USEPA 1664 revision B / ISO 9377-2	10 mg/L	2 mg/L	0.5 mg/L	10 mg/L	0.5 mg/L	ND	mg/L
Total Phenols / Phenol Index	ISO 6439 / SM 5530-B,C,D / IS 3025 (Part 43)	0.5 mg/L	0.01 mg/L	0.001 mg/L	1 mg/L	0.001 mg/L	ND	mg/L
Total Chlorine	USEPA 330.5 / SM4500-Cl-G	Sample and report only			-	0.2 mg/L	ND	[f] mg/L
Total Dissolved Solids (TDS)	SM 2540-C / USEPA 160.1	Sample and report only			2100 mg/L	10 mg/L	216	mg/L

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Total-Nitrogen	ISO 11905 - Part 1	20 mg/L	10 mg/L	5 mg/L	-	5 mg/L	ND	mg/L
Total-Phosphorus	ISO 11885, USEPA 200.8	3 mg/L	0.5 mg/L	0.1 mg/L	-	0.1 mg/L	0.6	mg/L
Total Suspended Solids (TSS)	USEPA 160.2 / SM 2540D	50 mg/L	15 mg/L	5 mg/L	100 mg/L	5 mg/L	7	mg/L
Chloride	SM 4500-Cl E	Sample and report only			-	10 mg/L	39	mg/L
Cyanide, total	ISO 6703 – 1, 2, 3 / USEPA 335.2 / SM 4500-CN E	0.2 mg/L	0.1 mg/L	0.05 mg/L	-	0.05 mg/L	ND	mg/L
Sulfate	SM 4500 SO4 E	Sample and report only			-	10 mg/L	42	mg/L
Sulfide	SM 4500-S2-D / ISO 10530	0.5 mg/L	0.05 mg/L	0.01 mg/L	2 mg/L	0.01 mg/L	ND	mg/L
Sulfite	ISO 10304-3	2 mg/L	0.5 mg/L	0.2 mg/L	-	0.2 mg/L	ND	mg/L

Remark:
△ is the degree above ambient temperature of receiving water body.
* Legal requirement based on Regulation/Standard information for discharged wastewater as well as the limitation value (or contractual limit value agreed by CETP) for the required parameters (mandatory). It is quoted only when the test method used is identical to the ZDHC WWG listed method.

Additional Color Test by using local standard required method:
As Per applicant's request, testing was conducted on composite sample based on ZDHC WWSG V2.1.

Parameters	Test Method	Legal Requirement*	Effluent
Color	ISO 7887-C	150 mg Pt /L	21 mg Pt /L

* Legal requirement based on Regulation/Standard information for discharged wastewater as well as the limitation value (or contractual limit value agreed by CETP) for the required parameters (mandatory), it was quoted for reference only.

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Sample / Sludge

Sludge flux (weight/time) and / or flow data volume/time: N/A

1. Heavy metals

Other heavy metals: With reference to acid/peroxide digestion EPA 6010C or EPA 6020A, modified from EN 16711-1 (ICP-MS Analysis), USEPA 200.8 with ICP/OES, or ICP-MS analysis.
Chromium VI: With reference to alkaline digestion modified from ISO 17075-1 (UV-VIS Analysis), ISO 18412 with Colorimetric UV/VIS analysis.
Mercury: With reference to Dissolution, acid digestion, modified from EN 16711-1 (ICP-MS Analysis), modified from ISO 11885 (ICP-MS Analysis).

Chemical substances	ZDHC reporting limit (Dry weight) (mg/kg)	Lab reporting limit (Dry weight) (mg/kg)	Sludge (Dry weight)	Unit
Antimony	5	3	ND	mg/kg
Arsenic	5	2	ND	mg/kg
Barium	200	100	ND	mg/kg
Cadmium	1	1	ND	mg/kg
Cobalt	400	100	ND	mg/kg
Copper	50	25	ND	mg/kg
Lead	5	2	ND	mg/kg
Nickel	20	10	ND	mg/kg
Selenium	5	3	ND	mg/kg
Silver	50	25	ND	mg/kg
Total Chromium	50	25	42	mg/kg
Zinc	400	200	980	mg/kg
Chromium (VI)	20	2	ND	mg/kg
Mercury	1	0.2	ND	mg/kg

2. Anions

With reference to USEPA 9013, USEPA 9014, ISO 6703 – 1, 2, 3 / USEPA 335.2 / APHA 4500-CN E with Colourimetry.

Chemical substances	ZDHC reporting limit (Dry weight) (mg/kg)	Lab reporting limit (Dry weight) (mg/kg)	Sludge (Dry weight)	Unit
Cyanide	20	15	ND	mg/kg

3. Conventional parameters

Chemical substances	Test method	Lab reporting limit (Dry Weight)	Sludge (Dry weight)	Unit
pH	USEPA SW 9045D	N/A	6.7	N/A
% Solids	USEPA 160.3	N/A	73	**%**
Paint Filter Test ^	USEPA 9095B	N/A	Pass	N/A
Fecal Coliform	USEPA 1681	10 MPN/g	55	MPN/g

^ - Report “Pass” when Paint Filter Test does not contain free liquid; Report “Fail” when Paint Filter Test does contain free liquid.

4. Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers

With reference to ASTM D7065, ISO 18254-1, with LC-MS-MS analysis.

Chemical substances	CAS no.	ZDHC reporting limit (Dry weight) (mg/kg)	Sludge (Dry weight)	Unit
Nonylphenol ethoxylates (NPEO)	9016-45-9; 26027-38-3; 37205-87-1; 68412-54-4; 127087-87-0	0.4	ND	mg/kg
Nonylphenol (NP), mixed isomers	104-40-5; 11066-49-2; 25154-52-3; 84852-15-3	0.4	ND	mg/kg
Octylphenol ethoxylates (OPEO)	9002-93-1; 9036-19-5; 68987-90-6	0.4	ND	mg/kg
Octylphenol (OP), mixed isomers	140-66-9; 1806-26-4; 27193-28-8	0.4	ND	mg/kg

5. Polycyclic aromatic hydrocarbons (PAHs)

With reference to USEPA 827E, modified from AFPS GS 2019-01 PAK (GC-MS Analysis) with Solvent extraction GC-MS analysis.

Chemical substances	CAS no.	ZDHC reporting limit (Dry weight) (mg/kg)	Sludge (Dry weight)	Unit
Acenaphthene	83-32-9	0.2	ND	mg/kg
Acenaphthylene	208-96-8	0.2	ND	mg/kg
Anthracene	120-12-7	0.2	ND	mg/kg
Benzo[a]anthracene	56-55-3	0.2	ND	mg/kg
Benzo[a]pyrene (BaP)	50-32-8	0.2	ND	mg/kg
Benzo[b]fluoranthene	205-99-2	0.2	ND	mg/kg
Benzo[e]pyrene	192-97-2	0.2	ND	mg/kg
Benzo[ghi]perylene	191-24-2	0.2	ND	mg/kg
Benzo[j]fluoranthene	205-82-3	0.2	ND	mg/kg
Benzo[k]fluoranthene	207-08-9	0.2	ND	mg/kg
Chrysene	218-01-9	0.2	ND	mg/kg
Dibenz[a,h]anthracene	53-70-3	0.2	ND	mg/kg
Fluoranthene	206-44-0	0.2	ND	mg/kg
Fluorene	86-73-7	0.2	ND	mg/kg
Indeno[1,2,3-cd]pyrene	193-39-5	0.2	ND	mg/kg
Naphthalene	91-20-3	0.2	ND	mg/kg
Phenanthrene	85-01-8	0.2	ND	mg/kg
Pyrene	129-00-0	0.2	ND	mg/kg

6. Chlorotoluenes

With reference to US EPA 827, modified from BS EN 17137 (GC-MS Analysis).

Chemical substances	CAS no.	ZDHC reporting limit (Dry weight) (mg/kg)	Sludge (Dry weight)	Unit
Other isomers of mono-, di-, tri-, tetra- and penta-chlorotoluene	Multiple	0.2	ND	mg/kg

7. Leachate heavy metals

With reference to toxicity leachate extraction procedure EPA 1311 followed by Acid digestion with ICP-OES, ICP-MS ISO 11885, USEPA 200.8, modified from EN 16711-1 (ICP-MS Analysis).

Chromium VI: With reference to toxicity leachate extraction procedure EPA 1311 followed by ISO 18412 Colorimetric UV/VIS analysis.

Mercury: With reference to toxicity leachate extraction procedure EPA 1311 followed by acid digestion, EPA 3051A, EPA 6020b, modified from EN 16711-1 (ICP-MS Analysis) with ICP MS analysis.

Chemical substances	Lab reporting limit (mg/L)	Sludge	Unit
Arsenic	0.5	N/A	mg/L
Cadmium	0.15	N/A	mg/L
Total Chromium	5	N/A	mg/L
Lead	0.5	N/A	mg/L
Antimony	0.6	N/A	mg/L
Barium	35	N/A	mg/L
Cobalt	80	N/A	mg/L
Copper	10	N/A	mg/L
Nickel	3.5	N/A	mg/L
Selenium	0.5	N/A	mg/L
Silver	5	N/A	mg/L
Zinc	50	N/A	mg/L
Chromium (VI)	2.5	N/A	mg/L
Mercury	0.05	N/A	mg/L

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Appendix 1: reference to ZDHC WWSG v2.1 Table 4B

Parameters		Disposal pathways						
	Total metals and anions threshold values (mg/kg)	A and B (Leachate result in mg/L)	C (Leachate result in mg/L)	D (Leachate result in mg/L)	E (Leachate result in mg/L)	F (Leachate result in mg/L)	G (Leachate result in mg/L)	G (Total metals limit in mg/kg)
Arsenic	10	Report only if required to test	5	2.75	0.5	0.5	0.5	75
Cadmium	3		1	0.58	0.15	0.15	0.15	85
Total Chromium	100		15	10	5	5	5	3000
Lead	10		5	2.75	0.5	0.5	0.5	840
Antimony	12		15	7.8	0.6	0.6	0.6	Sample and report only
Barium	700		100	67.5	35	35	35	
Cobalt	1600		80	80	80	80	80	
Copper	200		25	17.5	10	10	10	4300
Nickel	70		20	11.75	3.5	3.5	3.5	420
Selenium	10		1	0.75	0.5	0.5	0.5	100
Silver	100		5	5	5	5	5	Sample and report only
Zinc	1000		250	150	50	50	50	7500
Chromium VI	50		5	3.75	2.5	2.5	2.5	50
Mercury	1		0.2	0.125	0.05	0.05	0.05	57

Appendix 2: reference to ZDHC WWSG v2.1 Table 4C

Parameters	Disposal pathways					
	A and B	C	D	E	F	G
pH	Sample and report only	5 – 11 s.u.	5 – 11 s.u.	5 – 11 s.u.	6.5 – 9 s.u.	6.5 – 9 s.u.
% Solids		Sample and report only	Sample and report only	Sample and report only	Sample and report only	Sample and report only
Fecal Coliform					< 1000 (MPN/g)	
Paint Filter Test			Pass Paint filter test			Sample and report only
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers			< 0.4 mg/kg			
Polycyclic Aromatic Hydrocarbons (PAHs)			< 0.2 mg/kg			
Chlorotoluenes						

Appendix 2: reference to ZDHC WWSG v2.1 Table 4D

Parameters	Disposal pathways					
	A and B	C	D	E	F	G
Cyanide	Report only if required to test	100 mg/kg	85 mg/kg	70 mg/kg	70 mg/kg	70 mg/kg

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Photo of sampling points:

Untreated wastewater

Effluent

Sludge

SOFTLINES WASTEWATER TESTING
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Photo of samples:

Untreated wastewater

Effluent

Sludge

SOFTLINES WASTEWATER TESTING
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Attachment – sampling protocol for wastewater & sludge:

intertek
Total Quality. Assured.

ZDHC Monitoring

Sampling Protocol for Wastewater and Sludge acc. ZDHC SAP 2.1 incl. Apdx. E

Facility Name	Aarcon Denim Ltd.					
Address and Contact:	Sukrean, Mirzanagare-1344, Ashulia, Savare, Dhaka-1344					
Facility type : (tick all applicable)	☑ Dyeing and Finishing	☐ Fabric Mill	☐ Laundry, Washing and Finishing	☐ Natural Leather processing	☑ Printing	☐ Synthetic Leather processing
Date of sampling:	17-09-2024					
Sample General ID (if applicable):	ITSEL 2409062	☑ direct discharge ☐ indirect discharge ☐ Zero Liquid Discharge (ZLD) ☐ MMCF	☐ with pre-treatment ☐ without treatment ☑ with own ETP	discharge to: Canal		
Discharge description:	N/A					
Weather conditions:	on sampling day: Sunny	on day before: Sunny				

Fill in all above information as applicable.

Sample Type and Details (see also page 2)

☑ **Effluent Discharge** ☑ **direct:** or ○ **indirect**
Enter sampling times in Sample Details (page 2), and measure field parameters.
Enter sampling time(s) for Indirect discharge. Field parameters are not required, except on client's request.
☑ Facility has WWTP ○ Plant is in operating condition
◇ **with Equalisation Tank (EQT) present:**
Hydraulic Retention Time (HRT): ..... h
(= Volume of tank [m³] / Flow rate [m³/h])
If HRT > 12h, grab sampling from EQT is allowed.

☐ **Pre-treated WW without sludge** ☑ **Untreated WW** ◇ **with Equalisation Tank (EQT) present:**
HRT: 8.0 h (= Volume of tank [m³] / Flow rate [m³/h])
If HRT > 12h, grab sampling from EQT is allowed
☐ **Incoming Water** ☐ **MMCF**

☑ **Sludge** with below disposal pathway*): age of sludge : 180 days / ~~weeks~~

☑ A	○ B	○ C	○ D	○ E	○ F	○ G
>1000 °C offsite incineration	Landfill with significant control	Building products processed >1000 °C	Landfill with limited control	Incineration / Building products processed <1000 °C	Landfill with no control	Land application

*) if supplier cannot provide information, pathway "F" shall be assumed.

Sludge volume generated: N/A ○ m³/h ○ L/sec ○ other unit (specify): ..... ☑ per facility info ○ measured ○ estimated

☐ **Process Chemical** ○ liquid ○ solid (powder/granulate/pieces) ◇ from running process ◇ from warehouse/storage

Times of sampling (if applicable)	1	2	3	4	5	6	7	
Untreated:	10:10	11:10	12:10	13:10	14:10	15:10	16:10	or Grab (HRT>12h):
Effluent (indirect) 1):								or Grab (HRT>12h):
Incoming: 2)								or Grab 2) (HRT>12h):
Sludge (liquid):								**Solid sludge:** 14:45

1) for direct discharge, see p. 2
2) take grab sample for tap water, river water, and industrial treated river water without EQT; recycled water from EQT <12h must be composite.

Picture ID (or Date & Time / Interval):
ITSEL2409062-Eff-1
ITSEL2409062-Eff-S-1
ITSEL2409062-UTW-1
ITSEL2409062-UTW-S-1
ITSEL2409062-sludge-1
ITSEL2409062-sludge-S-1

GPS coordinates of sampling points:

Incoming W.:	Lat.: ○N ○S	Long.: ○E ○W
Untreated WW:	Lat.: ○N ○S 23.91013	Long.: ○E ○W 90.23980
Effluent:	Lat.: ○N ○S 23.90972	Long.: ○E ○W 90.23981
Sludge:	Lat.: ○N ○S 23.90972	Long.: ○E ○W 90.23974

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Sample Details 2) Field parameters usually are only required for **direct discharge**. If client requests also for indirect discharge, use below fields.

☑ Composite Sample ☐ Grab Sample (only allowed from EQT of Effluent with HRT>12h) (enter data in column for **Averaged Readings** and in field at right) Volume of aliquot(s): 1000 mL

	1	2	3	4	5	6	7	Averaged Readings or Grab Sample readings:
Time of discrete effluent sample **	10:30	11:30	12:30	13:30	14:30	15:30	16:30	
pH:	7.4	7.5	7.6	7.5	7.6	7.4	7.5	7.5
Temp. of WW discharge	30 °C	31 °C	30 °C	29 °C	30 °C	31 °C	30 °C	30 °C
Temp. of receiving water	28 °C	29 °C	28 °C	28 °C	29 °C	29 °C	28 °C	28 °C
Flow rate:	10.20 L/s	8.60 L/s	10.40 L/s	9.53 L/s	9.10 L/s	8.81 L/s	9.40 L/s	815 m³/d avg.
Dissolved Oxygen:	6.6 mg/L	6.7 mg/L	6.6 mg/L	6.5 mg/L	6.6 mg/L	6.7 mg/L	6.6 mg/L	6.60 mg/L
Total Chlorine:	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Persistent foam:	O yes ✓ no	O yes ✓ no	O yes ✓ no	O yes ✓ no	O yes ✓ no	O yes ✓ no	O yes ✓ no	

**) time when discrete sample for composite was taken. Use comment field if number of samples is greater than seven, or if above fields are otherwise not sufficient.
Note: 1.0 m³/h = 0.27 L/s ; 1.0 L/s = 86.4 m³/d; 1 m³/h = 0.042 m³/d; *multiply the flow rate in m³/h by the daily operation time of the ETP to get flow rate in m³/d*

Sampling procedure: O automated sampling ✓ with beaker/bowl O other:

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Wastewater Flow Data (Effluent/Discharge)

System:	☑ Flow meter (in facility)	☐ Pipe (O)	☐ Flume (U)	☐ Weir (V)
Diameter [cm]				
Water Depth [cm]				
Flow Speed [cm/sec]				

General Field Parameters and Sensory Data (enter as far as applicable)

Type	T ambient air [°C]	Odour	Colour	Foaming	Floating matter
Incoming				O yes O no	O yes O no
Untreated			Dark Grrey	O yes ✓ no	O yes ✓ no
Effluent			Treansparent	O yes ✓ no	O yes ✓ no
Sludge			Grrey		

Field Testing QA/QC

Parameter	Lab Control Sample target value	Lab Control Sample measured value	Accuracy [%]
pH	7.0	6.90	98
Total Chlorine	0.50 mg/L	0.49 mg/L	98

Other observations:

Additional notes (e.g., alternatively measured flow and readings, abbreviations used, etc):

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ZDHC Monitoring

ZDHC Wastewater Sampling - Facility Confirmation

The Wastewater samples have been collected under the facility's normal production scale and wastewater flow rate. The sampler listed below was on-site and collected the samples.

Sampling person (name & email address):
Muhtasim Kader Mridil
environmentallab.softlinesbgd
@intertek.com

Facility Name:
Aarcon Denim Ltd.

Sampler's ZDHC accreditation no.:
ZDHC-A-24-E-C001068-
R3EA1-B021D

Facility's Representative name:
Dewan Shafiqul Islam

Sampler's Signature:

Facility's Representative Signature and Stamp:

Aarcon Denim Ltd. Mirzanagar, Savar, Dhaka

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End of report

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