LAB REPORT

Report Number	(8724)244-0087		
Date of sampling	August 30, 2024		
Reporting Date	September 11,2024		
Factory Company Name	SHAHI EXPORTS PVT LTD UNIT-9		
Factory Address	Sy no 171, 2nd Cross, Outer Ring Road, Industrial Subrub II Stage, Peenya 2nd Stage, Yeshwantur, Bengaluru, Karnataka-560022		
Discharge Type	Zero Liquid Discharge		
Discharge Destination	No Industrial Wastewater Discharged from Facility (Resue Back to Production).		
Average total industrial wastewater generated	Equal or more than $15m^3$ per day	**Manufacturing Process Type**	Textile
Onsite ETP / Pretreatment	Yes	**Homogenization Tank & Holding Time**	Yes, Less Than 12 Hours
ZDHC Sampler ID	A-22-E-C001068-R2411-6B8E4		
Sample Type & Description & Sampling Method	Untreated wastewater	I001, White Colour Liquid ,	Composite Sample
	Effluent	I002, Not Applicable	
	Sludge	I003, Grey Colour Soild,	Composite Sample

Local Legal Data / Contractual agree by CETP Data	
Local Legal Standard Name / Name of Contractual agree by CETP[a]	NA
Standard Number	NA
Parameters (ZDHC WWG V2.1, Table 2 & 3) exceeded local legal standard / contractual agree by CETP standard	Not applicable
Discharge permit provided	Yes

Result Overview			
Wastewater Overall Result (ZDHC WWG V2.1, Table 1)	Not detected		
Wastewater Overall Result (ZDHC WWG V2.1, Table 2 & 3)	Not applicable		
Sludge Disposal Pathway	B	**Sludge Overall Result**	Meet Sludge Disposal Pathway

Bureau Veritas
Consumer Products Services (I) Pvt. Ltd.
AKR Tech Park, Ground Floor, C Block, Survey No. 112, Bangalore-560068
0091-80-40701600
Website:cps.bureauveritas.com.

Report Number (8724)244-0087

Internal Description			
Sample reference number	(8724)244-0087		
Date & time of the beginning of sampling	August 30, 2024	,	11:00 AM
Date & time of the end of sampling	August 30, 2024	,	04:00 PM
Sample received date	August 31, 2024	,	07:00 PM
Testing period	August 31, 2024	to	September 11, 2024
Arrival temperature at laboratory	29 °C		
Comments	Samples received within holding time and temperature.		

The results of this report shall not be used for any regulatory compliance purposes. The sampling is agreed with client.
If there are questions or concerns on this report, please contact the following persons:

General enquiry and invoicing Mr. SUNESH
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Technical enquiry Mr. SUDALAIMUTHU.VS
Email: sudalaimuthu.vs@in.bureauveritas.com, Tel: 080-40701639

Report approved by

P. Sugumar, Lab Manager - Analytical Services

Certificate No. QAI/CLA/TL/2023/0012 (Pls refer the website www.qai.org.in to view the scope of accreditation)

Wastewater Result Summary - ZDHC MRSL Parameters

ZDHC MRSL Wastewater	Untreated I001
1A) AP and APEOs: including all isomers	MEET
1B) Anti-Microbials & Biocides	MEET
1C) Chlorinated Parafins	MEET
1D) Chlorobenzenes and Chlorotoluenes	MEET
1E) Chlorophenols	MEET
1F) DMFa	MEET (S)
1G) Dyes - Carcinogenic or Equivalent Concern	MEET
1H) Dyes - Disperse (Sensitising)	MEET
1I) Dyes - Navy Blue Colourant	MEET
1J) Flame Retardants	MEET
1K) Glycols / Glycol Ethers	MEET
1L) Halogenated Solvents	MEET (S)
1M) Organotin Compounds	MEET
1N) Other / Miscellaneous Chemicals	MEET
1O) PFCs	MEET
1P) Phthalates	MEET
1Q) PAHs	MEET
1R) Restricted Aromatic Amines	MEET
1S) UV Absorbers	MEET
1T) VOC	MEET (S)

Wastewater Result Summary - ZDHC Heavy Metals Parameters

ZDHC Heavy Metals Wastewater	Effluent I002
Antimony	NA
Chromium (VI)	NA
Barium	NA
Selenium	NA
Tin	NA
Arsenic	NA
Total Chromium	NA
Cobalt	NA
Cadmium	NA
Copper	NA
Lead	NA
Nickel	NA
Silver	NA
Zinc	NA
Mercury	NA

Wastewater Result Summary - ZDHC Conventional and Anions Parameters

ZDHC Conventional and Anions Wastewater	Effluent I002
pH[f]	NA
Temperature difference[f]	NA
E.coli	NA
Colour	NA
Persistent foam[f]	NA
Wastewater flowrate[f]	NA
Ammonium-Nitrogen	NA
AOX	NA
Biochemical Oxygen Demand (BOD_5)	NA
Chemical Oxygen Demand (COD)	NA
Dissolved Oxygen (DO)[f]	NA
Oil & Grease	NA
Total Phenols / Phenol Index	NA
Total Chlorine[f]	NA
Total Dissolved Solids (TDS)	NA
Total Nitrogen	NA
Total Phosphorus	NA
Total Suspended Solids (TSS)	NA
Chloride	NA
Cyanide, total	NA
Sulfate	NA
Sulfide	NA
Sulfite	NA

Sludge Result Summary - ZDHC Sludge Parameters

Sludge Parameters	Sludge I003
Antimony	MEET
Arsenic	MEET
Barium	MEET
Cadmium	MEET
Cobalt	MEET
Copper	MEET
Lead	MEET
Nickel	MEET
Selenium	MEET
Silver	MEET
Total Chromium	MEET
Zinc	MEET
Chromium (VI)	MEET
Mercury	MEET
pH	MEET
% Solids	DATA (S)
Paint Filter Test	DATA
Fecal Coliform	DATA (S)
AP and APEOs: including all isomers	MEET
Polycyclic Aromatic Hydrocarbons (PAHs)	MEET
Chlorotoluenes	MEET
Cyanide	MEET (S)

Sludge flux and/or sludge flow data: NA

Note / Key:

ND	=	Not detected (less than reporting limit)	NA	=	Not applicable
D	=	Detected	-	=	Did not perform
MEET	=	Meet ZDHC Wastewater Guidelines Requirements	[f]	=	Parameter tested in field
NOT MEET	=	Not Meet ZDHC Wastewater Guidelines Requirements			
DATA	=	Report only, refer data			
(T)	=	Handling temperature exceeded			
@	=	Maximum holding time exceeded			
[a]	=	The local legal standard name and number are referenced to discharge permit (or contractual agree by CETP) that provided by company			
(S)	=	Analysis was subcontracted for testing			
*	=	See remark			

Wastewater Test Result - ZDHC MRSL

1A) AP and APEOs: including all isomers

NP/OP: ISO 18857-2 (modified dichloromethane extraction) or ASTM D7065 (GC-MS or LC-MS(-MS), OPEO/NPEO (n>2): ASTM D7742 ISO 18857-2 dichloromethane extraction) or ASTM D7065 (GC-MS or LC-MS(-MS), OPEO/NPEO (n>2): ASTM D7742 ISO 18857-2

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
NPEO	9016-45-9, 26027-38-3, 37205-87-1, 68412-54-4, 127087-87-0	5	ND			µg/L
NP, mixed isomers	104-40-5, 11066-49-2, 25154-52-3, 84852-15-3	5	ND			µg/L
OPEO	9002-93-1, 9036-19-5, 68987-90-6	5	ND			µg/L
OP, mixed isomers	140-66-9, 1806-26-4, 27193-28-8	5	ND			µg/L

1B) Anti-Microbials & Biocides

US EPA 8270 E Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC-MS BS EN 12673-1999 an alternative method of solvent extraction and derivatization are included/ US EPA 8270 E Solvent extraction, followed by GC-MS ISO 14154:2005

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
o-Phenylphenol (+salts)	90-43-7	100	ND			µg/L
Triclosan	3380-34-5	100	ND			µg/L
Permethrin	Multiple	500	ND			µg/L

1C) Chlorinated Parafins

EPA 3510 and analyzed by ISO18219-2:2021 Method for MCCP with GC-MS(NCI) or LC-MS/MS

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
MCCPs (C14-C17)	85535-85-9	500	ND			µg/L
SCCPs (C10-C13)	85535-84-8	25	ND			µg/L

1D) Chlorobenzenes and Chlorotoluenes

USEPA 8260D, 8270E, Purge and Trap, Head Space, Dichloromethane extraction followed by GC-MS

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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

1E) Chlorophenols

USEPA 8270E Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC-MS, BS EN 12673-1999 the procedure of solvent extraction and derivatization are included

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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	ND			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	ND			µg/L
3,4,5-trichlorophenol	609-19-8	0.5	ND			µg/L
2,3,5,6-tetrachlorophenol	935-95-5	0.5	ND			µg/L
2,3,4,6-tetrachlorophenol	58-90-2	0.5	ND			µg/L
2,3,4,5-tetrachlorophenol	4901-51-3	0.5	ND			µg/L
Pentachlorophenol (PCP)	87-86-5	0.5	ND			µg/L

1F) N,N-di-methylformamide (DMFa)

EPA 8015, EPA 8270E

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
Dimethyl formamide; N,N-dimethylformamide (DMFa)[a]	68-12-2	1000	ND			µg/L

1G) Dyes - Carcinogenic or Equivalent Concern

Liquid extraction, LC-MS

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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

1G) Dyes - Carcinogenic or Equivalent Concern (continued)

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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

1H) Dyes - Disperse (Sensitising)

Liquid extraction, LC-MS

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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 (CAS 12222-75-2)	12222-75-2	50	ND			µg/L
Disperse Blue 35 (CAS 56524-77-7)	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

1I) Dyes - Navy Blue Colourant

Liquid extraction, LC-MS

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
Component 1: C39H23Cl-CrN7O12S 2Na	118685-33-9	500	ND			µg/L
Component 2: C46H-30CrN10O20S2 3Na	Not allocated	500	ND			µg/L

1J) Flame Retardants

USEPA 8270E, ISO 22032, USEPA 527 and USEPA 8321B Dichloromethane extraction GC-MS or LC-MS(-MS)

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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
Decabromophenyl ether (DecaBDE)	1163-19-5	25	ND			µg/L
Hexabromocyclodecane (HBCDD)	3194-55-6	25	ND			µg/L
Octabromodiphenyl ether (OctaBDE)	32536-52-0	25	ND			µg/L
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	25	ND			µg/L
Polybromobiphenyls (PBB)	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)phosphone 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

1J) Flame Retardants (continued)

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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
Tribromophenylethers (TriBDEs)	Multiple	25	ND			µg/L
Boric acid[b]	10043-35-3, 11113-50-1	100	ND			µg/L
Diboron trioxide[b]	1303-86-2	100	ND			µg/L
Disodium octaborate[b]	12008-41-2	100	ND			µg/L
Disodium tetraborate anhydrous[b]	1303-96-4, 1330-43-4	100	ND			µg/L
Tetraboron disodium heptaoxide, hydrate[b]	12267-73-1	100	ND			µg/L

1K) Glycols / Glycol Ethers

USEPA 8270E Liquid extraction, LC-MS GC-MS

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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-methyloxypropylacetate	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

1L) Halogenated Solvents

USEPA 8260D Headspace GC-MS or Purge and trap GC-MS

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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

1M) Organotin Compounds

ISO 17353 Derivatisation with NaB (C2H5)4 GC-MS

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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 componuds (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

1N) Other / Miscellaneous Chemicals

Liquid extraction, LC-MSMS

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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 - Borate, zinc salt[c]	12767-90-7	100	ND			µg/L
Zinc salt - Borate ,zinc salt[c]		100	ND			µg/L
Silica (used in sand blasting)[d]	14464-46-1	-	NA			µg/L

1O) Perfluorinated and Polyfluorinated Chemicals (PFCs)

PFCs: EPA 537:2020FTOH: BS EN 12673-1999, EPA 8270PFCs: LC-MSMSFTOH: GC-MS Derivatisation with acetic anhydride followed by GC-MS

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
Perfluorooctane sulfonate (PFOS) and related substances, Perfluorooctanoic acid (PFOA)	Multiple	0.01	ND			µg/L
Perfluorooctanoic acid (PFOA) related substances	Multiple	1	ND			µg/L

1P) Phthalates - including all other esters of ortho-phthalic acid

USEPA 8270E, ISO 18856 Dichloromethane extraction GC-MS

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
1,2-benzenedicarboxylic acid, di-C6-8 branched and liearalkyl esters , C7-rich (DIHP)	71888-89-6, 84777-06-0	10	ND			µg/L
1,2-benzenedicarboxylic acid, di-C7-11 branched and liearalkyl esters (DHNUP)	68515-42-4, 68515-50-4	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-iso-butyl phthalate (DIBP)	84-69-5	10	ND			µg/L
Di-iso-nonyl 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

1Q) Polycyclic Aromatic Hydrocarbons (PAHs)

USEPA 8270E DIN 38407-39 Solvent extraction GC-MS

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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

1Q) Polycyclic Aromatic Hydrocarbons (PAHs) (continued)

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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

1R) Restricted Aromatic Amines (Cleavable from Azo-colourants)

Reduction step with sodium dithionite, solvent extraction EPA 8270

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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-dimethoxylbenzidine	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-chloro-aniline)	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

1S) UV Absorbers

USEPA 8270 ISO 22032, USEPA 527 and USEPA 8321B.

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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-tert-butylphenol (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

1T) Volatile Organic Compounds (VOC)

USEPA 8270 ISO 22032, USEPA 527 and USEPA 8321B.

Test Parameters	CAS Number	Reporting limit & LOQ	Result of Test Items			Unit
			Untreated I001			
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[a]	108-88-3	1	ND			µg/L

Note / Key:

a = Sample and report only for mock leather.

b = Limit refers to elemental boron, not the salt.

c = Limit refers to total boron and total zinc individually, not the salt. Total boron and total zinc values should be less than 100 µg/L to be conformant. When total boron is >100 µg/L and total zinc are <100 µg/L (or vice versa) the sample is still conformant.

d = Not required to test this parameter as this related to sand blasting.

Report Number (8724)244-0087

Wastewater Test Result - ZDHC Heavy Metals

Wastewater - ZDHC Heavy Metals

With reference to EPA 3015A, 6020A, 200.8, 6020B, 3051A and ISO 17294-2 and analyzed by ICP-MS

Test Parameters	Reporting limit & LOQ	Limit				Result of Test Items			Unit
		Foundational	Progressive	Aspirational	Local Legal Standard / Contractual agree with CETP Standard	Effluent I002			
Antimony	0.01	0.1	0.05	0.01	-	NA			mg/L
Chromium (VI)	0.001	0.05	0.005	0.001	-	NA			mg/L
Barium	1	Sample & Report			-	NA			mg/L
Selenium	1	Sample & Report			-	NA			mg/L
Tin	1	Sample & Report			-	NA			mg/L
Arsenic	0.005	0.05	0.01	0.005	-	NA			mg/L
Total Chromium	0.05	0.2	0.1	0.05	-	NA			mg/L
Cobalt	0.01	0.05	0.02	0.01	-	NA			mg/L
Cadmium	0.01	0.1	0.05	0.01	-	NA			mg/L
Copper	0.25	1	0.5	0.25	-	NA			mg/L
Lead	0.01	0.1	0.05	0.01	-	NA			mg/L
Nickel	0.05	0.2	0.1	0.05	-	NA			mg/L
Silver	0.005	0.1	0.05	0.005	-	NA			mg/L
Zinc	0.5	5	1	0.5	-	NA			mg/L
Mercury	0.001	0.01	0.005	0.001	-	NA			mg/L

Wastewater Test Result - ZDHC Conventional & Anions

Wastewater - ZDHC Conventional

Te+A761:J804st Param	Test Method	Reporting limit & LOQ	Limit				Result of Test Items		Unit
			Foundational	Progressive	Aspirational	Local Legal Standard / Contractual agree with CETP Standard	Effluent I002		
pH[f]	With reference to ISO 10523, EPA 150.2, APHA 4500-H+	-	6-9	6-9	6-9	-	NA		-
Temperature difference[f]	USEPA 170.1, GB/T 13195	-	Δ+15	Δ+10	Δ+5	-	NA		°C
E.coli	-	126	126	126	126	-	NA		MPN/100-ml
Colour (436 nm)	ISO 7887 (Method A and B)	2	7	5	2	-	NA		m^{-1}
Colour (525 nm)		1	5	3	1	-	NA		m^{-1}
Colour (620 nm)		1	3	2	1	-	NA		m^{-1}
Persistent Foam[f]	-	-	No indication of Persistent Foam			-	NA		-
Wastewater Flowrate[f]	-	-	-	-	-	-	NA		m^3/day
Ammonium-Nitrogen	ISO 11732, ISO 7150, USEPA 350.1, APHA 4500 NH3-N, HJ 535 or HJ 536	0.5	10	1	0.5	-	NA		mg/L
AOX	ISO 9562, EN ISO 9563, USEPA 1650, HJ.T 83-2001	0.1	3	0.5	0.1	-	NA		mg/L
BOD_5	ISO 5815-1 & -2, EN1899-1, USEPA 405.1, APHA 5210B or HJ 505	8	30	15	8	-	NA		mg/L
COD	ISO 6060, USEPA 410.4, APHA 5220D or GB/T 11914	40	150	80	40	-	NA		mg/L
DO[f]	ISO 5814, EPA 360.1 or HJ 506	-	Sample & Report	Sample & Report	Sample & Report	-	NA		mg/L
Oil & Grease	ISO 9377-2, USEPA 1664 or HJ 637	0.5	10	2	0.5	-	NA		mg/L
Total Phenols / Phenol Index	ISO 14402, APHA 5530B, C, D or HJ 503	0.001	0.5	0.01	0.001	-	NA		mg/L
Total Chlorine[f]	ISO 7393-2, EPA 330.5 or HJ 586	0.1	Sample & Report	Sample & Report	Sample & Report	-	NA		mg/L
TDS	APHA 2540C, GB/T 5750.4	5	Sample & Report	Sample & Report	Sample & Report	-	NA		mg/L
Total Nitrogen	ISO 5663, ISO 29411, USEPA 351.2, APHA 4500P-J, APHA 4500N-C/ HJ 636 or GB 11891	5	20	10	5	-	NA		mg/L
Total Phosphorus	ISO 11885, ISO 6878, USEPA 365.4, APHA 4500P-J or GB/T 11893	0.1	3	0.5	0.1	-	NA		mg/L
TSS	ISO 11923, USEPA 160.2, APHA 2540D or GB/T 11901	5	50	15	5	-	NA		mg/L

Wastewater Test Result - ZDHC Conventional & Anions

Wastewater - ZDHC Anions

Test Parameters	Test Method	Reporting limit & LOQ	Limit				Result of Test Items		Unit
			Foundational	Progressive	Aspirational	Local Legal Standard / Contractual agree with CETP Standard	Effluent I002		
Chloride	APHA 4500-Cl	1	Sample & Report	Sample & Report	Sample & Report	-	NA		mg/L
Cyanide, total	APHA-4500-CN. C&E, EPA 9010C, 9013 & 9014	0.05	0.2	0.1	0.05	-	NA		mg/L
Sulfate	APHA 4500-SO4 - E	3	Sample & Report	Sample & Report	Sample & Report	-	NA		mg/L
Sulfide	APHA 4500-S2- D	0.01	0.5	0.05	0.01	-	NA		mg/L
Sulfite	EPA 377.1 & APHA 4500-SO3 2 B	0.2	2	0.5	0.2	-	NA		mg/L

Sludge Test Result - Metals & Conventional and Anions & MRSL

Sludge - Metals

With reference to EPA 3015A, 6020A, 200.8, 6020B, 3051A and ISO 17294-2 and analyzed by ICP-MS

Test Parameters	Sludge Reporting limit & LOQ	Limit			Result of Test Items			Unit
		Total Metals and Anions Threshold Values			Sludge I003			
Antimony	5	12			ND			mg/kg
Arsenic	5	10			ND			mg/kg
Barium	200	700			ND			mg/kg
Cadmium	1	3			ND			mg/kg
Cobalt	400	1600			ND			mg/kg
Copper	50	200			ND			mg/kg
Lead	5	10			ND			mg/kg
Nickel	20	70			ND			mg/kg
Selenium	5	10			ND			mg/kg
Silver	50	100			ND			mg/kg
Total Chromium	50	100			ND			mg/kg
Zinc	400	1000			ND			mg/kg
Chromium (VI)	20	50			ND			mg/kg
Mercury	1	1			ND			mg/kg

Sludge (Leachate) - Metals

With reference to EPA 1311 and HJ/T 300 for leachate

Test Parameters	Reporting limit & LOQ	Limit			Result of Test Items			Unit
		Leachate Limit			Leachate 1004			
Antimony	0.6	-			NA			mg/L
Arsenic	0.5	-			NA			mg/L
Barium	35	-			NA			mg/L
Cadmium	0.15	-			NA			mg/L
Cobalt	80	-			NA			mg/L
Copper	10	-			NA			mg/L
Lead	0.5	-			NA			mg/L
Nickel	3.5	-			NA			mg/L
Selenium	0.5	-			NA			mg/L
Silver	5	-			NA			mg/L
Total Chromium	5	-			NA			mg/L
Zinc	50	-			NA			mg/L
Chromium (VI)	2.5	-			NA			mg/L
Mercury	0.05	-			NA			mg/L

Sludge - Conventional

Test Parameters	Test Method	Reporting limit & LOQ	Limit		Result of Test Items			Unit
			Sludge Reporting Limit	Limits for specific disposal pathway	Sludge I003			
pH	EPA SW 9045D	-	-	5-11	7			-
% Solids	EPA 160.3, HJ613 at 105 degree C	-	-	Sample & report	16.5			%
Fecal Coliform	EPA 1680	-	-	Sample & report	46			MPN/g
Paint Filter Test	EPA 9095B	-	-	Sample & report	Pass			-

Sludge - AP and APEOs: including all isomers

NP/OP: ISO 18857-2 (modified dichloromethane extraction) or ASTM D7065 (GC-MS or LC-MS(-MS) OPEO/NPEO (n>2): ASTM D7742 or ISO 18857-2

Test Parameters	CAS Number	Limit		Result of Test Items			Unit
		Sludge Reporting Limit & LOQ	Limits for specific disposal pathway	Sludge I003			
NPEO	9016-45-9, 26027-38-3, 37205-87-1, 68412-54-4, 127087-87-0	0.4	-	ND			mg/kg
NP, mixed isomers	104-40-5, 11066-49-2, 25154-52-3, 84852-15-3	0.4	-	ND			mg/kg
OPEO	9002-93-1, 9036-19-5, 68987-90-6	0.4	-	ND			mg/kg
OP, mixed isomers	140-66-9, 1806-26-4, 27193-28-8	0.4	-	ND			mg/kg

Sludge - Chlorotoluenes

US EPA 8260D, 8270E, Purge and Trap, Head Space Dichloromethane extraction followed by GC-MS

Test Parameters	CAS Number	Limit		Result of Test Items			Unit
		Sludge Reporting Limit & LOQ	Limits for specific disposal pathway	Sludge I003			
Chlorotoluenes	Multiple	0.2	-	ND			mg/kg

Sludge - Polycyclic Aromatic Hydrocarbons (PAHs)

USEPA 3540 + USEPA 3650 + USEPA 8270

Test Parameters	CAS Number	Limit		Result of Test Items			Unit
		Sludge Reporting Limit & LOQ	Limits for specific disposal pathway	Sludge I003			
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

Sludge - Anions

USEPA 9013 + USEPA 9014

Test Parameters	Limit				Result of Test Items			Unit
	Sludge Reporting Limit & LOQ	Limits for specific disposal pathway			Sludge I003			
Cyanide	20	100			0.9			mg/kg

Appendix A - Discharge limit according to regulation

Not applicable

Appendix B - Photos of sampling points and samples (with relative time and date)

I001 - Untreated wastewater

Sampling point
30/08/2024,11.00 AM

Sampling point surrounding environment
30/08/2024,11.15 AM

Labelled sample bottles
30/08/2024,04.00 PM

Sample for phthalate test
30/08/2024,04.00 PM

Sample packaging
30/08/2024,04.00 PM

Appendix B - Photos of sampling points and samples (with relative time and date) (continued)

I003 - Sludge

Sampling point
30/08/2024,11.00 AM

Sampling point surrounding environment
30/08/2024,11.15 AM

Labelled sample bottles
30/08/2024,04.00 PM

Sample packaging
30/08/2024,04.00 PM

ZDHC Wastewater Sampling Field Data Form and Representative Sample Declaration

CPSD-AN-00613-DATA 07	
Issue Date:	February 20, 2024
Version No.:	1
Business Line:	Analytical

Attach the completed field data form in the test report.

Facility Information

Date of Sampling:	30-08-2024
Sample Number (ZDHC Composite Sample Code):	Zdhc-A-22-E-C001068-R2411-6B8E4
Facility Name:	Shahi exports Pvt. Ltd Unit-9
Facility Address:	11 Stage, Peenya 2nd Stage, Yeshwanthpur Bangalore
Facility Type (tick all applicable):	○ Dyeing and Finishing ○ Fabric Mill ✓ Laundry, Washing and Finishing ○ Natural Leather processing ○ Printing ○ Synthetic Leather processing ○ Other (please specify)
Discharge Type (tick applicable):	○ Direct discharge ○ with pre-treatment Other Notes: ○ Indirect discharge ○ without pre-treatment ✓ Zero liquid discharge (ZLD) ○ with own ETP
Discharge Description:	○ Discharge to environment (e.g. river, stream, sea etc.) ○ Other (please specify) ○ Sewage treatment plant
Discharge Volume:	○ ≥ 15m³ per day ○ < 15m³ per day

Sample Type and Details

Sample Type	Sample Details
○ Incoming Water	
✓ Untreated WW	○ with equalisation tank (EQT) present Hydraulic Retention Time (HRT) (Hours): = volume of tank (m³) / flow rate (m³/h) If HRT > 12 h, grab sampling from EQT is allowed.
○ Effluent	○ Direct — Enter sampling time(s) in page 2 and take field test measurements. ○ Indirect — Enter sampling time(s) in page 2. No field test measurements required except on client's request. ○ Facility has WWTP ○ Plant is in operating condition ○ with equalisation tank (EQT) present Hydraulic Retention Time (HRT) (Hours): = volume of tank (m³) / flow rate (m³/h) If HRT > 12 h, grab sampling from EQT is allowed.
✓ Sludge	Disposal Pathway (The pathway must be defined by the facility. If the facility cannot provide information, pathway "F" shall be assumed.) ○ A >1000°C offsite incineration ○ B Landfill with significant control ○ C Building products processed >1000°C ○ D Landfill with limited control ○ E Incineration/ Building products processed <1000°C ○ F Landfill with no control ○ G Land application Sludge flux (weight/time) if applicable:

ZDHC Wastewater Sampling - Facility Confirmation

The wastewater samples have been collected under the facilities' normal production scale and wastewater flow rate. The sampler listed below was on-site and collected the samples. Sampling protocol for wastewater and sludge samples are in accordance with ZDHC SAP including appendix E.
In no circumstances shall samples be taken during times when the production process is not running or the wastewater is diluted, for example due to heavy rainfall.

Facility Confirmation		Sampler Information	
Facility Name:	UNIT-9 SHAHI EXPORTS PVT. LTD	Sampler's Name/ Email:	M.GOPALAKRISHNAN
Facility Representative Name:	MR. Rakshith kumar	Sampler's ZDHC Accredited No.:	A-22-E-C001068-R2411-6B8E4
Facility Representative Signature and Stamp:	Prakash CV	Sampler's Signature:	
Date:	30-08-2024	Date:	30-08-2024

ZDHC Wastewater Sampling Field Data Form and Representative Sample Declaration	CPSD-AN-00613-DATA 07 Issue Date: Version No.: 1 Business Line: Analytical

ZDHC Wastewater Flow Device Dimensions				
Measurement (cm)	Meter	Pipe (O)	Flume (U)	Weir (V)
Diameter	--			
Depth	--	--	--	

ZDHC Wastewater Sampling Field Testing QA/ QC			
Parameter	Lab Control Sample (LCS) Known	Lab Control Sample (LCS) Measured	Accuracy (%)
pH			
Total Chlorine			

ZDHC Wastewater Sample Collection Field Test Measurements									
Incoming Sample Point	○ Composite Sample		○ Grab Sample		Start Time:		Stop Time:		
Sampling Locations:	GPS coordinates:		Lat.: N / S		Long.: E / W				
Sampling Mode:	○ Manual		○ Autosampler - Sampling Device Description/ Owner:						
Sampling Time (Hours)	0	1	2	3	4	5	6	Average	
Recording time of discrete sample								--	
Colour (visual estimation):									
Untreated Sample Point	○ Composite Sample		○ Grab Sample		Start Time:		Stop Time:		
Sampling Locations:	GPS coordinates:		Lat.: N / S		Long.: E / W				
Sampling Mode:	○ Manual		○ Autosampler - Sampling Device Description/ Owner:						
Sampling Time (Hours)	0	1	2	3	4	5	6	Average	
Recording time of discrete sample								--	
Colour (visual estimation):									
Untreated Effluent Sample Point	✓ Composite Sample		○ Grab Sample		Start Time: 11.00AM		Stop Time:	4.00 PM	
Sampling Locations:	GPS coordinates:		Lat.: N / S		Long.: E / W				
Sampling Mode:	✓ Manual		○ Autosampler - Sampling Device Description/ Owner:						
Sampling Time (Hours)	0	1	2	3	4	5	6	Average	
Recording time of discrete sample		11.00Am	12.00pm	1.00pm	2.00pm	3.00pm	4.00pm	--	
Temperature (°C): WW Discharge		30.C	29°C	29°C	28°C	26.C	27 °C		
Temperature (°C): Receiving Water		28.C							
pH:		8.4	8.2	8.4	8.1	7.8	8.2		
Dissolved Oxygen (mg/L):									
Total Chlorine (mg/L):									
Persistent Foam (Yes/ No):	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	
Wastewater Flow Meter (L/min):									
Alternate Measured Flow: Depth (cm)									
Alternate Measured Flow: Velocity (cm/sec)									
Colour (visual estimation):		White colour	White colour	White colour	White colour	White colour	White colour		
Volume collected (L):		1000 ml	1000ml	1000ml	1000ml	1000 ml	1000ml		
Total volume collected (L):	Collect 3.33-litres each hour for a total minimum volume of 20-litres								
Sludge Sample Point	✓ Composite Sample				Start Time:		Stop Time:		
Sampling Locations	GPS coordinates:		Lat.: N / S		Long.: E / W				
Sampling Mode	✓ Manual		○ Autosampler - Sampling Device Description/ Owner:						
Sampling Time (Hours)	0	1	2	3	4	5	6	Average	
Recording time of discrete sample		11.00Am						--	
Colour (visual estimation):		Grey Colour							

Comments/ Other Observations

CPSD-AN-00613-DATA 07-FIELD DATA RECORD ZDHC SAMPLING-V1

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End of the Report