

TEST REPORT

CLIENT DETAILS

Client Name: Al Karam Textile Mills (Pvt.) Ltd
Client Contact: Tanveer Khan
Telephone: +92 111 111 258
E-mail: tanveer.khan@alkaram.com
Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

LABORATORY DETAILS

SGS Affiliate: SGS Pakistan (Private) Limited, C & P
SGS Contact: M. Rehan Ali
Telephone: +92 213 512 1388 – 97 Ext.: 531
E-mail: Rehan.Ali@sgs.com
Address: Plot No. 4, Sector 24, Korangi Industrial Area, Near Shan Chowrangi, Karachi-74900

FACTORY DETAILS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Contact: Tanveer Khan
Telephone: +92 111 111 258
E-mail: tanveer.khan@alkaram.com
Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

Types of Mills:

(1) Spinning	(2) Yarn Dyeing, Bleaching	(3) Fabric Dyeing, Finishing, Washing	(4) Fabric Dyeing, Finishing, Printing
(5) Vertical Knit	(6) Vertical Woven	(7) Assembling	(9) Washing
(10) Packing, Warehouse			

On-Site ETP: Yes
Discharge Destination: To the Environment
Name of Municipal/Centralized ETP: N/A
Address of Municipal/Centralized ETP: N/A

SAMPLE AND TESTING DETAILS

Sampling Country: SGS Pakistan (Private) Limited - C & P
ZDHC Sampler Accreditation Cert. No.: C74D106818359
Sampling Date: 08/03/2024
Sample Received Date: 08/03/2024
Test Performing Period: 08/03/2024 - 20/03/2024
Sample Received Temperature: 6.8 °C
No. of Samples: Water (2); Sludge (1);
Sample Descriptions:
 1) Untreated Wastewater (6-hour Composite)
 2) Effluent (6-hour Composite)
 3) Sludge (Grab)
Sample Volume: 18L each water sample; 500g sludge sample in total
Testing Institute: SGS Pakistan (Private) Limited, Chemical & Environmental
Discharge Method: Direct Discharge

OVERALL RESULTS

	Untreated Wastewater	Effluent	Sludge	Leachate
Conventional Parameters / Anions / Metals:	-	Fulfill Progressive Limit	Sample and Report Only	Sample and Report Only
MRSL Parameters:	Not Detected	-	Sample and Report Only	-

REMARKS

- This test document cannot be reproduced in any way, except in full content, without prior approval in writing by the laboratory.
- The results shown in this test report refer only to the sampling and the sample(s) tested unless otherwise stated.

Signed for and on behalf of




M. Rehan Ali
Assistant Manager - Connectivity & Products

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. This document Cannot be reproduced except in full, without prior approval of the Company.

RESULT SUMMARY

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
 Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

TEST ITEMS	Untreated Wastewater	Effluent	Sludge	Leachate
Conventional Parameters	-	Please refer to the information in TEST RESULTS	Please refer to the information in TEST RESULTS	-
Anions	-	O	Sample and Report Only	-
Metals	-	O	O	Sample and Report Only
Alkylphenol (AP) & Alkylphenol Ethoxylates (APEOs)	O	-	Sample and Report Only	-
Anti-Microbials & Biocides	O	-	-	-
Chlorinated Paraffins	O	-	-	-
Chlorobenzenes and Chlorotoluenes	O	-	Sample and Report Only	-
Chlorophenols	O	-	-	-
Dimethyl Formamide (DMFa)	O	-	-	-
Dyes - Carcinogenic or Equivalent Concern	O	-	-	-
Dyes - Disperse (Allergenic)	O	-	-	-
Dyes - Navy Blue Colourant	O	-	-	-
Flame Retardants	O	-	-	-
Glycols / Glycol Ethers	O	-	-	-
Halogenated Solvents	O	-	-	-
Organotin Compounds	O	-	-	-
Other / Miscellaneous Chemicals	O	-	-	-
Perfluorinated and Polyfluorinated Chemicals (PFCs)	O	-	-	-
Phthalates	O	-	-	-
Polycyclic Aromatic Hydrocarbons (PAHs)	O	-	Sample and Report Only	-
Restricted Aromatic Amines	O	-	-	-
UV Absorbers	O	-	-	-
Volatile Organic Compounds (VOCs)	O	-	-	-

Note:

X - Detected

O - Not Detected

N/A - Not Tested / Not Applicable

TEST RESULTS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

		Sample ID		KH24-07814-01		KH24-07814-02		-		-		KH24-07814-03		-		-		-		Factory Performances	Local Wastewater Discharge Requirement%
		Date of Sampling		08/03/2024		08/03/2024		-		-		08/03/2024		-		-		-			
		Sampling Location		ETP Inlet		ETP Outlet		-		-		Sludge		-		-		-			
		Sampling Start Time		9:20		10:45		-		-		17:10		-		-		-			
		Sampling End Time		15:20		16:45		-		-		17:10		-		-		-			
		Date of Sample Received		08/03/2024		08/03/2024		-		-		08/03/2024		-		-		-			
Items	CAS No.	Reporting Limit	Units	Untreated Wastewater	Effluent	Reporting Limit	Units	SludgeΦ	Reporting Limit	Units	Leachate	Untreated Wastewater	Effluent	Sludge	Leachate	Effluent					
Sample Colour Description	-	-	-	Dark Blue	Ligt Grey	-	-	Dark Greyish	-	-	-	-	-	-	-	-					
Wastewater Flowrate*	-	-	m ³ /day	-	4080	-	-	-	-	-	-	-	-	-	-	-					
Sludge Disposal Pathway	-	-	-	-	-	-	-	Pathway A	-	-	-	-	-	-	-	-					
Conventional Parameters																					
pH	-	-	-	-	7.5	-	-	8.0	-	-	-	-	Fulfill Aspirational Limit	Sample and Report Only	-	6.0 - 9.0					
Temp-Difference	-	-	°C	-	n/a	-	-	-	-	-	-	-	N/A	-	-	≤ 3					
Temp-Discharge Pipe	-	-	°C	-	26.2	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	< 40					
Temp-Receiving Water	-	-	°C	-	n/a	-	-	-	-	-	-	-	N/A	-	-	N/A					
E. Coli	-	126	MPN / 100mL	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	N/A					
Colour (436nm)	-	2	m ⁻¹	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	N/A					
Colour (525nm)	-	1	m ⁻¹	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	N/A					
Colour (620nm)	-	1	m ⁻¹	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	N/A					
Persistent Foam	-	Not Visible	-	-	Not Visible	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	N/A					
Ammonium-N	-	0.5	mg/L	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	< 40					
AOX	-	0.1	mg/L	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	N/A					
5-Days Biochemical Oxygen Demand (BOD ₅)	-	5	mg/L	-	11	-	-	-	-	-	-	-	Progressive Limit	-	-	< 80					
Chemical Oxygen Demand (COD)	-	40	mg/L	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	< 400					
Dissolved Oxygen (DO)	-	0.5	mg/L	-	1.9	-	-	-	-	-	-	-	Sample and Report Only	-	-	N/A					
Oil & Grease	-	0.5	mg/L	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	< 10					
Total Phenols / Phenol Index	-	0.001	mg/L	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	< 0.3					
Total Chlorine	-	0.5	mg/L	-	n.d.	-	-	-	-	-	-	-	Sample and Report Only	-	-	< 1					
Total Dissolved Solids (TDS)	-	50	mg/L	-	999	-	-	-	-	-	-	-	Sample and Report Only	-	-	< 3500					
Total Nitrogen	-	5	mg/L	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	N/A					
Total Phosphorus	-	0.1	mg/L	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	N/A					
Total Suspended Solids (TSS)	-	5	mg/L	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	< 200					
Paint Filter Test	-	-	-	-	-	Pass	-	Pass	-	-	-	-	-	Sample and Report Only	-	N/A					
Fecal Coliform	-	-	-	-	-	1000	MPN/g	n.d.	-	-	-	-	-	Sample and Report Only	-	N/A					
Anions																					
Chloride	-	1	mg/L	-	253	-	-	-	-	-	-	-	Sample and Report Only	-	-	< 1000					
Cyanide, Total	-	0.05	mg/L	-	n.d.	20	mg/kg	n.d.	-	-	-	-	Fulfill Aspirational Limit	Sample and Report Only	-	< 1					
Sulfate	-	5	mg/L	-	150	-	-	-	-	-	-	-	Sample and Report Only	-	-	< 600					
Sulfide	-	0.01	mg/L	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	< 1					
Sulfite	-	0.2	mg/L	-	n.d.	-	-	-	-	-	-	-	Fulfill Aspirational Limit	-	-	N/A					

TEST RESULTS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

		Sample ID		KH24-07814-01		KH24-07814-02		-		-		KH24-07814-03		-		-		-		Factory Performances	Local Wastewater Discharge Requirement%
		Date of Sampling		08/03/2024		08/03/2024		-		-		08/03/2024		-		-		-			
		Sampling Location		ETP Inlet		ETP Outlet		-		-		Sludge		-		-		-			
		Sampling Start Time		9:20		10:45		-		-		17:10		-		-		-			
		Sampling End Time		15:20		16:45		-		-		17:10		-		-		-			
		Date of Sample Received		08/03/2024		08/03/2024		-		-		08/03/2024		-		-		-			
Items	CAS No.	Reporting Limit	Units	Untreated Wastewater	Effluent	Reporting Limit	Units	Sludge Φ	Reporting Limit	Units	Leachate	Untreated Wastewater	Effluent	Sludge	Leachate	Effluent					
Metals																					
Total Antimony (Sb)**	7440-36-0	0.01	mg/L	-	n.d.	5	mg/kg	n.d.	0.01	mg/L	N/A	-	Fulfill Aspirational Limit	-	N/A	N/A					
Chromium (VI)	7440-47-3, 18540-29-9	0.001	mg/L	-	n.d.	20	mg/kg	n.d.	0.001	mg/L	N/A	-	Fulfill Aspirational Limit	-	N/A	< 1					
Total Barium (Ba)	7440-39-3	35	mg/L	-	n.d.	200	mg/kg	n.d.	35	mg/L	N/A	-	Sample and Report Only	-	N/A	< 1.5					
Total Selenium (Se)	7782-49-2	0.5	mg/L	-	n.d.	5	mg/kg	n.d.	0.5	mg/L	N/A	-	Sample and Report Only	-	N/A	< 0.5					
Total Tin (Sn)	7440-31-5	0.1	mg/L	-	n.d.	-	-	-	-	-	-	-	Sample and Report Only	-	-	N/A					
Total Arsenic (As)	7440-38-2	0.005	mg/L	-	n.d.	5	mg/kg	n.d.	0.005	mg/L	N/A	-	Fulfill Aspirational Limit	-	N/A	< 1					
Total Chromium (Cr)	7440-47-3	0.05	mg/L	-	n.d.	50	mg/kg	137	0.05	mg/L	n.d.	-	Fulfill Aspirational Limit	-	Sample and Report Only	< 1					
Total Cobalt (Co)	7440-48-4	0.01	mg/L	-	n.d.	400	mg/kg	n.d.	0.01	mg/L	N/A	-	Fulfill Aspirational Limit	-	N/A	N/A					
Total Cadmium (Cd)	7440-43-9	0.01	mg/L	-	n.d.	1	mg/kg	n.d.	0.01	mg/L	N/A	-	Fulfill Aspirational Limit	-	N/A	< 0.1					
Total Copper (Cu)	7440-50-8	0.25	mg/L	-	n.d.	50	mg/kg	755	0.25	mg/L	n.d.	-	Fulfill Aspirational Limit	-	Sample and Report Only	< 1					
Total Lead (Pb)	7439-92-1	0.01	mg/L	-	n.d.	5	mg/kg	n.d.	0.01	mg/L	n.d.	-	Fulfill Aspirational Limit	-	Sample and Report Only	< 0.5					
Total Nickel (Ni)	7440-02-0	0.05	mg/L	-	n.d.	20	mg/kg	n.d.	0.05	mg/L	N/A	-	Fulfill Aspirational Limit	-	N/A	< 1					
Total Silver (Ag)	7440-22-4	0.005	mg/L	-	n.d.	50	mg/kg	n.d.	0.005	mg/L	N/A	-	Fulfill Aspirational Limit	-	N/A	< 1					
Total Zinc (Zn)	7440-66-6	0.1	mg/L	n.d.	n.d.	400	mg/kg	556	0.1	mg/L	N/A	Not Detected	Fulfill Aspirational Limit	-	N/A	< 5					
Total Mercury (Hg)	7439-97-6	0.001	mg/L	-	n.d.	1	mg/kg	n.d.	0.001	mg/L	N/A	-	Fulfill Aspirational Limit	-	N/A	< 0.01					
Total Boron (B)	7440-42-8	0.1	mg/L	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	N/A					
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers																					
Nonylphenol ethoxylates (NPEO)	9018-74-9, 26027-38-3, 37205-87-1, 68412-54-4, 117927-83-1	5	µg/L	n.d.	-	0.4	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-					
Nonylphenol (NP), mixed isomers	11066-49-2, 25154-52-3, 9002-93-1	5	µg/L	n.d.	-	0.4	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-					
Octylphenol ethoxylates (OPEO)	9036-19-5, 68987-90-6	5	µg/L	n.d.	-	0.4	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-					
Octylphenol (OP), mixed isomers	140-66-9, 1806-26-4, 27193-28-8	5	µg/L	n.d.	-	0.4	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-					
Anti-Microbials & Biocides																					
o-Phenylphenol (+salts)	90-43-7	100	µg/L	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Triclosan	3380-34-5	100	µg/L	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Permethrin	Multiple	500	µg/L	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Chlorinated Paraffins																					
Medium-chain Chlorinated Paraffins (MCCPs) (C14-C17)	85535-85-9	500	µg/L	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Short-chain Chlorinated Paraffin (SCCPs) (C10-C13)	85535-84-8	25	µg/L	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Chlorobenzenes and Chlorotoluenes																					
Monochlorobenzenes	108-90-7	0.2	µg/L	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
1,2-Dichlorobenzene	95-50-1	0.2	µg/L	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
1,3-Dichlorobenzene	541-73-1	0.2	µg/L	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					

TEST RESULTS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
 Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

		Sample ID	KH24-07814-01	KH24-07814-02	-	-	KH24-07814-03	-	-	-	Factory Performances					Local Wastewater Discharge Requirement%
		Date of Sampling	08/03/2024	08/03/2024	-	-	08/03/2024	-	-	-						
		Sampling Location	ETP Inlet	ETP Outlet	-	-	Sludge	-	-	-						
		Sampling Start Time	9:20	10:45	-	-	17:10	-	-	-						
		Sampling End Time	15:20	16:45	-	-	17:10	-	-	-						
		Date of Sample Received	08/03/2024	08/03/2024	-	-	08/03/2024	-	-	-						
Items	CAS No.	Reporting Limit	Units	Untreated Wastewater	Effluent	Reporting Limit	Units	Sludge Φ	Reporting Limit	Units	Leachate	Untreated Wastewater	Effluent	Sludge	Leachate	Effluent
1,4-Dichlorobenzene	106-46-7	0.2	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
1,2,3-Trichlorobenzene	87-61-6	0.2	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
1,2,4-Trichlorobenzene	120-82-1	0.2	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
1,3,5-Trichlorobenzene	108-70-3	0.2	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
1,2,3,4-Tetrachlorobenzene	634-66-2	0.2	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
1,2,3,5-Tetrachlorobenzene	634-90-2	0.2	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
1,2,4,5-Tetrachlorobenzene	95-94-3	0.2	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Pentachlorobenzene	608-93-5	0.2	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Hexachlorobenzene	118-74-1	0.2	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2-Chlorotoluene	95-49-8	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
3-Chlorotoluene	108-41-8	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
4-Chlorotoluene	106-43-4	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
2,3-Dichlorotoluene	32768-54-0	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
2,4-Dichlorotoluene	95-73-8	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
2,5-Dichlorotoluene	19398-61-9	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
2,6-Dichlorotoluene	118-69-4	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
3,4-Dichlorotoluene	95-75-0	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
3,5-Dichlorotoluene	25186-47-4	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
2,3,4-Trichlorotoluene	7359-72-0	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
2,3,6-Trichlorotoluene	2077-46-5	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
2,4,5-Trichlorotoluene	6639-30-1	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
2,4,6-Trichlorotoluene	23749-65-7	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
3,4,5-Trichlorotoluene	21472-86-6	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
2,3,4,5-Tetrachlorotoluene	76057-12-0	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
2,3,5,6-Tetrachlorotoluene	29733-70-8	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
2,3,4,6-Tetrachlorotoluene	875-40-1	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Pentachlorotoluene	877-11-2	0.2	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Chlorophenols																
2-Chlorophenol	95-57-8	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
3-Chlorophenol	108-43-0	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-

TEST RESULTS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

		Sample ID	KH24-07814-01	KH24-07814-02	-	-	KH24-07814-03	-	-	-	Factory Performances					Local Wastewater Discharge Requirement%
		Date of Sampling	08/03/2024	08/03/2024	-	-	08/03/2024	-	-	-						
		Sampling Location	ETP Inlet	ETP Outlet	-	-	Sludge	-	-	-						
		Sampling Start Time	9:20	10:45	-	-	17:10	-	-	-						
		Sampling End Time	15:20	16:45	-	-	17:10	-	-	-						
		Date of Sample Received	08/03/2024	08/03/2024	-	-	08/03/2024	-	-	-						
Items	CAS No.	Reporting Limit	Units	Untreated Wastewater	Effluent	Reporting Limit	Units	Sludge Φ	Reporting Limit	Units	Leachate	Untreated Wastewater	Effluent	Sludge	Leachate	Effluent
4-Chlorophenol	106-48-9	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2,3-Dichlorophenol	576-24-9	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2,4-Dichlorophenol	120-83-2	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2,5-Dichlorophenol	583-78-8	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2,6-Dichlorophenol	87-65-0	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
3,4-Dichlorophenol	95-77-2	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
3,5-Dichlorophenol	591-35-5	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2,3,4-Trichlorophenol	15950-66-0	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2,3,5-Trichlorophenol	933-78-8	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2,3,6-Trichlorophenol	933-75-5	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2,4,5-Trichlorophenol	95-95-4	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2,4,6-Trichlorophenol	88-06-2	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
3,4,5-Trichlorophenol	609-19-8	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2,3,5,6-Tetrachlorophenol	935-95-5	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2,3,4,6-Tetrachlorophenol	58-90-2	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2,3,4,5-Tetrachlorophenol	4901-51-3	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Pentachlorophenol (PCP)	87-86-5	0.5	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Dimethyl Formamide (DMFa)																
Dimethyl formamide; N,N-dimethylformamide (DMFa)**	68-12-2	1000	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Dyes - Carcinogenic or Equivalent Concern																
Basic Violet 3 with >0.1% of Michler's Ketoneb	548-62-9	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
C.I. Acid Red 26	3761-53-3	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
C.I. Acid Violet 49	1694-09-3	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
C.I. Basic Blue 26 with Michler's Ketone >0.1%	2580-56-5	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
C.I. Basic Green 4 (Malachite Green Chloride) [^]	569-64-2	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
C.I. Basic Green 4 (Malachite Green Oxalate) [^]	2437-29-8	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
C.I. Basic Green 4 (Malachite Green)	10309-95-2	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
C.I. Basic Red 9	569-61-9	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
C.I. Basic Violet 14	632-99-5	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
C.I. Direct Black 38	1937-37-7	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-

TEST RESULTS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

		Sample ID	KH24-07814-01	KH24-07814-02	-	-	KH24-07814-03	-	-	-	Factory Performances					Local Wastewater Discharge Requirement%
		Date of Sampling	08/03/2024	08/03/2024	-	-	08/03/2024	-	-	-						
		Sampling Location	ETP Inlet	ETP Outlet	-	-	Sludge	-	-	-						
		Sampling Start Time	9:20	10:45	-	-	17:10	-	-	-						
		Sampling End Time	15:20	16:45	-	-	17:10	-	-	-						
		Date of Sample Received	08/03/2024	08/03/2024	-	-	08/03/2024	-	-	-						
Items	CAS No.	Reporting Limit	Units	Untreated Wastewater	Effluent	Reporting Limit	Units	Sludge Φ	Reporting Limit	Units	Leachate	Untreated Wastewater	Effluent	Sludge	Leachate	Effluent
C.I. Direct Blue 6	2602-46-2	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
C.I. Direct Red 28	573-58-0	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
C.I. Disperse Blue 1	2475-45-8	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
C.I. Disperse Blue 3	2475-46-9	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Orange 11	82-28-0	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Dyes - Disperse (Allergenic)																
Disperse Blue 102	12222-97-8	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Blue 106	12223-01-7	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Blue 124	61951-51-7	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Blue 26	3860-63-7	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Blue 35	12222-75-2, 56524-77-7	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Blue 7	3179-90-6	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Brown 1	23355-64-8	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Orange 1	2581-69-3	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Orange 3	730-40-5	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Orange 37/59/76	13301-61-6	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Red 1	2872-52-8	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Red 11	2872-48-2	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Red 17	3179-89-3	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Yellow 1	119-15-3	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Yellow 3	2832-40-8	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Yellow 39	12236-29-2	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Yellow 49	54824-37-2	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disperse Yellow 9	6373-73-5	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Dyes - Navy Blue Colourant																
Component 1: C39H23Cl-CrN7O12S 2Na	118685-33-9	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Component 2: C46H-30CrN10O20S2 3Na	Not Allocated	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Flame Retardants																
2,2-bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Bis(2,3-dibromopropyl) phosphate (BIS)	5412-25-9	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Decabromodiphenyl ether (DecaBDE)	1163-19-5	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-

TEST RESULTS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

		Sample ID	KH24-07814-01	KH24-07814-02	-	-	KH24-07814-03	-	-	-	Factory Performances					Local Wastewater Discharge Requirement%
		Date of Sampling	08/03/2024	08/03/2024	-	-	08/03/2024	-	-	-						
		Sampling Location	ETP Inlet	ETP Outlet	-	-	Sludge	-	-	-						
		Sampling Start Time	9:20	10:45	-	-	17:10	-	-	-						
		Sampling End Time	15:20	16:45	-	-	17:10	-	-	-						
		Date of Sample Received	08/03/2024	08/03/2024	-	-	08/03/2024	-	-	-						
Items	CAS No.	Reporting Limit	Units	Untreated Wastewater	Effluent	Reporting Limit	Units	Sludge Φ	Reporting Limit	Units	Leachate	Untreated Wastewater	Effluent	Sludge	Leachate	Effluent
Hexabromocyclodecane (HBCDD)	3194-55-6	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Octabromodiphenyl ether (OctaBDE)	32536-52-0	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Polybromobiphenyls (PBB)	59536-65-1	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Tetrabromobisphenol A (TBBPA)	79-94-7	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Tris-(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Tris-(1-aziridinyl)phosphine oxide (TEPA)	545-55-1	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Tris-(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Tris-(2-chloroethyl) phosphate (TCEP)	115-96-8	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Tris-(2,3-dibromopropyl)-phosphate (TRIS)	126-72-7	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Decabromobiphenyl (DecaBB)	13654-09-6	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Dibromobiphenyls (DIBB)	Multiple	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Octabromobiphenyls (OctaBB)	Multiple	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Dibromopropylether	21850-44-2	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Hexabromodiphenyl ether (HexaBDE)	36483-60-0	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Monobromobiphenyls (MonoBB)	Multiple	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Monobromodiphenylethers (MonoBDEs)	Multiple	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Nonabromobiphenyls (NonaBB)	Multiple	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Nonabromodiphenyl ether (NonaBDE)	63936-56-1	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Tribromodiphenylethers (TriBDEs)	Multiple	25	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Boric acid	10043-35-3, 11113-50-1	100	$\mu\text{g/L}$	See Total Boron (B) Result	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Diboron trioxide	1303-86-2	100	$\mu\text{g/L}$	See Total Boron (B) Result	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disodium octaborate	12008-41-2	100	$\mu\text{g/L}$	See Total Boron (B) Result	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Disodium tetraborate anhydrous	1303-96-4, 1330-43-4	100	$\mu\text{g/L}$	See Total Boron (B) Result	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Tetraboron disodium heptaoxide, hydrate	12267-73-1	100	$\mu\text{g/L}$	See Total Boron (B) Result	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Glycols / Glycol Ethers																
2-ethoxyethanol	110-80-5	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2-ethoxyethyl acetate	111-15-9	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-

TEST RESULTS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

		Sample ID	KH24-07814-01	KH24-07814-02	-	-	KH24-07814-03	-	-	-	Factory Performances					Local Wastewater Discharge Requirement%
		Date of Sampling	08/03/2024	08/03/2024	-	-	08/03/2024	-	-	-						
		Sampling Location	ETP Inlet	ETP Outlet	-	-	Sludge	-	-	-						
		Sampling Start Time	9:20	10:45	-	-	17:10	-	-	-						
		Sampling End Time	15:20	16:45	-	-	17:10	-	-	-						
		Date of Sample Received	08/03/2024	08/03/2024	-	-	08/03/2024	-	-	-						
Items	CAS No.	Reporting Limit	Units	Untreated Wastewater	Effluent	Reporting Limit	Units	Sludge Φ	Reporting Limit	Units	Leachate	Untreated Wastewater	Effluent	Sludge	Leachate	Effluent
2-methoxyethanol	109-86-4	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2-methoxyethylacetate	110-49-6	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
2-methoxypropylacetate	70657-70-4	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Bis(2-methoxyethyl)-ether	111-96-6	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Ethylene glycol dimethyl ether	110-71-4	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Triethylene glycol dimethyl ether	112-49-2	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Halogenated Solvents																
1,2-Dichloroethane	107-06-2	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Methylene chloride	75-09-2	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Tetrachloroethylene	127-18-4	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Trichloroethylene	79-01-6	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Organotin Compounds																
Dipropyltin compounds (DPT)	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Mono-, di- and tri-butyltin derivatives	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Monobutyltin (MBT)	1118-46-3, 78763-54-9	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Dibutyltin (DBT)	1002-53-5	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Tributyltin (TBT)	56573-85-4	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Mono-, di- and tri-methyltin derivatives	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Monomethyltin (MMT)	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Dimethyltin (DMT)	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Trimethyltin (TMT)	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Mono-, di- and tri-octyltin derivatives	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Monooctyltin (MOT)	15231-57-9	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Dioctyltin (DOT)	94410-05-6, 12531-44-4	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Trioctyltin (TOT)	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Mono-, di- and tri-phenyltin derivatives	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Monophenyltin (MPHT)	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Diphenyltin (DPHT)	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Triphenyltin (TPHT)	892-20-6, 668-34-8	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Tetrabutyltin compounds (TeBT)	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-

TEST RESULTS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

		Sample ID		KH24-07814-01		KH24-07814-02		-		-		KH24-07814-03		-		-		-		Factory Performances	Local Wastewater Discharge Requirement%
		Date of Sampling		08/03/2024		08/03/2024		-		-		08/03/2024		-		-		-			
		Sampling Location		ETP Inlet		ETP Outlet		-		-		Sludge		-		-		-			
		Sampling Start Time		9:20		10:45		-		-		17:10		-		-		-			
		Sampling End Time		15:20		16:45		-		-		17:10		-		-		-			
		Date of Sample Received		08/03/2024		08/03/2024		-		-		08/03/2024		-		-		-			
Items	CAS No.	Reporting Limit	Units	Untreated Wastewater	Effluent	Reporting Limit	Units	Sludge Φ	Reporting Limit	Units	Leachate	Untreated Wastewater	Effluent	Sludge	Leachate	Effluent					
Tripolytin Compounds (TPT)	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Tetraoctyltin compounds (TeOT)	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Tricyclohexyltin (TCyHT)	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Tetraethyltin Compounds (TeET)	Multiple	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Other/Miscellaneous Chemicals																					
AEEA [2-(2-aminoethylamino) ethanol]	111-41-1	500	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Bisphenol A	80-05-7	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Thiourea	62-56-6	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Quinoline	91-22-5	50	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Borate, zinc salt	12767-90-7	100	$\mu\text{g/L}$	See Total Zinc (Zn) & Total Boron (B) Results	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Perfluorinated and Polyfluorinated Chemicals (PFCs)																					
Perfluorooctane sulfonate (PFOS)****	1763-23-1	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
N-ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	4151-50-2	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
N-methylperfluoro-1-octanesulfonamide (N-Me-FOSA)	31506-32-8	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE)	1691-99-2	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-Me-FOSE)	24448-09-7	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Perfluorooctane sulfonamide (PFOSA)	754-91-6	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Perfluorooctanoic acid (PFOA)****	335-67-1	0.01	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Methyl Perfluorooctanoate (Me-PFOA)	376-27-2	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Ethyl Perfluorooctanoate (Et-PFOA)	3108-24-5	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
1H,1H,2H,2H-Perfluorodecylacrylate (8:2 FTA)	27905-45-9	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
8:2 Fluorotelomer methacrylate (8:2 FTMA)	1996-88-9	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Phthalates - including all other esters of ortho-phthalic acid																					
1,2-benzenedicarboxylic acid, di-C6-8 branched and linear alkyl esters, C7-rich (DIHP)	71888-89-6, 84777-06-0	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
1,2-benzenedicarboxylic acid, di-C7-11 branched and linear alkyl esters (DHNUP)	68515-42-4, 68515-50-4	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Butyl benzyl phthalate (BBP)	85-68-7	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Di-cyclohexyl phthalate (DCHP)	84-61-7	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					

TEST RESULTS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

		Sample ID	KH24-07814-01	KH24-07814-02	-	-	KH24-07814-03	-	-	-	Factory Performances					Local Wastewater Discharge Requirement%
		Date of Sampling	08/03/2024	08/03/2024	-	-	08/03/2024	-	-	-						
		Sampling Location	ETP Inlet	ETP Outlet	-	-	Sludge	-	-	-						
		Sampling Start Time	9:20	10:45	-	-	17:10	-	-	-						
		Sampling End Time	15:20	16:45	-	-	17:10	-	-	-						
		Date of Sample Received	08/03/2024	08/03/2024	-	-	08/03/2024	-	-	-						
Items	CAS No.	Reporting Limit	Units	Untreated Wastewater	Effluent	Reporting Limit	Units	Sludge Φ	Reporting Limit	Units	Leachate	Untreated Wastewater	Effluent	Sludge	Leachate	Effluent
Di-iso-decyl phthalate (DIDP)	26761-40-0	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Di-iso-octyl phthalate (DIOP)	27554-26-3	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Di-isobutyl phthalate (DIBP)	84-69-5	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Di-isononyl phthalate (DINP)	28553-12-0	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Di-n-hexyl phthalate (DnHP)	84-75-3	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Di-n-octyl phthalate (DNOP)	117-84-0	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Di-n-pentylphthalates	131-18-0	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Di-n-propyl phthalate (DPRP)	131-16-8	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Di(ethylhexyl) phthalate (DEHP)	117-81-7	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Dibutyl phthalate (DBP)	84-74-2	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Diethyl phthalate (DEP)	84-66-2	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Diisopentylphthalates	605-50-5	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Dinonyl phthalate (DNP)	84-76-4	10	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAHs)																
Acenaphthene	83-32-9	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Acenaphthylene	208-96-8	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Anthracene	120-12-7	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Benzo[a]anthracene	56-55-3	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Benzo[a]pyrene (BaP)	50-32-8	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Benzo[b]fluoranthene	205-99-2	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Benzo[e]pyrene	192-97-2	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Benzo[ghi]perylene	191-24-2	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Benzo[j]fluoranthene	205-82-3	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Benzo[k]fluoranthene	207-08-9	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Chrysene	218-01-9	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Dibenz[a,h]anthracene	53-70-3	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Fluoranthene	206-44-0	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Fluorene	86-73-7	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Indeno[1,2,3-cd]pyrene	193-39-5	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-
Naphthalene	91-20-3	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-

TEST RESULTS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

		Sample ID		KH24-07814-01		KH24-07814-02		-		-		KH24-07814-03		-		-		-		Factory Performances	Local Wastewater Discharge Requirement%
		Date of Sampling		08/03/2024		08/03/2024		-		-		08/03/2024		-		-		-			
		Sampling Location		ETP Inlet		ETP Outlet		-		-		Sludge		-		-		-			
		Sampling Start Time		9:20		10:45		-		-		17:10		-		-		-			
		Sampling End Time		15:20		16:45		-		-		17:10		-		-		-			
		Date of Sample Received		08/03/2024		08/03/2024		-		-		08/03/2024		-		-		-			
Items	CAS No.	Reporting Limit	Units	Untreated Wastewater	Effluent	Reporting Limit	Units	Sludge Φ	Reporting Limit	Units	Leachate	Untreated Wastewater	Effluent	Sludge	Leachate	Effluent					
Phenanthrene	85-01-8	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-					
Pyrene	129-00-0	1	$\mu\text{g/L}$	n.d.	-	0.2	mg/kg	n.d.	-	-	-	Not Detected	-	Sample and Report Only	-	-					
Restricted Aromatic Amines (Cleavable from Azo-colourants)																					
2-naphthylamine	91-59-8	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
2-Naphthylammoniumacetate [^]	553-00-4	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
2,4-xylidine	95-68-1	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
2,4,5-trimethylaniline	137-17-7	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
2,4,5-trimethylaniline hydrochloride [^]	21436-97-5	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
2,6-xylidine	87-62-7	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
3,3'-dichlorobenzidine	91-94-1	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
3,3-dimethoxybenzidine	119-90-4	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
3,3-dimethylbenzidine	119-93-7	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4-aminoazobenzene	60-09-3	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4-aminodiphenyl	92-67-1	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4-chloro-o-toluidine	95-69-2	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4-chloro-o-toluidinium chloride [^]	3165-93-3	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4-chloroaniline	106-47-8	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate [^]	39156-41-7	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4-methoxy-m-phenylenediamine	615-05-4	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4-methyl-m-phenylenediamine	95-80-7	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4,4-methylenebis-(2-chloro-aniline)	101-14-4	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4,4-methylenedi-o-toluidine	838-88-0	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4,4-methylenedianiline	101-77-9	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4,4-oxydianiline	101-80-4	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
4,4-thiodianiline	139-65-1	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
5-nitro-o-toluidine	99-55-8	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
6-methoxy-m-toluidine	120-71-8	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
Benzidine	92-87-5	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
o-aminoazotoluene	97-56-3	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
o-anisidine	90-04-0	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					
o-toluidine	95-53-4	0.1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-					

TEST RESULTS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

Sample ID		KH24-07814-01		KH24-07814-02		-		-		KH24-07814-03		-		-		-		Factory Performances	Local Wastewater Discharge Requirement%
Date of Sampling		08/03/2024		08/03/2024		-		-		08/03/2024		-		-		-			
Sampling Location		ETP Inlet		ETP Outlet		-		-		Sludge		-		-		-			
Sampling Start Time		9:20		10:45		-		-		17:10		-		-		-			
Sampling End Time		15:20		16:45		-		-		17:10		-		-		-			
Date of Sample Received		08/03/2024		08/03/2024		-		-		08/03/2024		-		-		-			
Items	CAS No.	Reporting Limit	Units	Untreated Wastewater	Effluent	Reporting Limit	Units	Sludge Φ	Reporting Limit	Units	Leachate	Untreated Wastewater	Effluent	Sludge	Leachate	Effluent			
UV Absorbers																			
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	36437-37-3	100	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-			
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	100	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-			
2-benzotriazol-2-yl-4,6-ditertbutylphenol (UV-320)	3846-71-7	100	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-			
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)	3864-99-1	100	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-			
Volatile Organic Compounds (VOC)																			
Benzene	71-43-2	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-			
m-cresol	108-39-4	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-			
o-cresol	95-48-7	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-			
p-cresol	106-44-5	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-			
Xylene	1330-20-7	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-			
Toluene***	108-88-3	1	$\mu\text{g/L}$	n.d.	-	-	-	-	-	-	-	Not Detected	-	-	-	-			
Additional Parameters																			
Dry Mass (Total Solids)	-	-	-	-	-	-	%	23.8	-	-	-	-	-	Sample and Report Only	-	-			

Remarks:

- *n.d.* = Not Detected
- *N/A* = Not Tested / Not Applicable
- *- = Not Required to be Test
- ^The test result is based on the calculation of selected element(s) and to the worst-case scenario
- *Test data is measured/provided by the client
- **Sample and report only for polyester wet processing facilities
- ***Sample and report only for mock leather
- ****PFOs refer to its salts/derivative including PFOs-K (CAS No.: 2795-39-3), PFOs-Li (CAS No.: 29457-72-5), PFOs-NH₄ (CAS No.: 29081-56-9), PFOs-NH(OH)₂ (CAS No.: 70225-14-8), PFOs-N(C₂H₅)₂ (CAS No.: 56773-42-3) and POSF (CAS No.: 307-35-7)
- *****PFOA refer to its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1)
- @ = The amine was detected according to ISO 14362-1:2017 with the reducing agent. A similar result was obtained from the procedure carried out without the reducing agent. According to ISO 14362-1:2017 Annex C.2.1.2.2, the amine originated from a source other than azo colorants
- # = The amine was detected according to ISO 14362-1:2017 with the reducing agent. Confirmation procedure was carried out without reducing agent, according to ISO 14362-1:2017 Annex C.2.1.2.2, the amine originated from azo colorants
- Φ Sludge results are reported based on dry mass
- %Please refer to the details of the Local Wastewater Discharge Requirement in the Appendix Section
- Due to inaccessible of the location of Receiving Water, the measurement of Temp-Receiving Water cannot be determined
- Δ The analysis was performed by a subcontracted laboratory assessed as competent

TEST PARAMETERS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

ITEMS	CAS No.	METHODS	WASTEWATER			SLUDGE						LEACHATE							
			Foundational	Progressive	Aspirational	Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G	Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G
Conventional Parameters																			
pH	-	Wastewater: SM 4500 H+, Electrometric method only Sludge: USEPA 9045 D	6-9			Sample and Report Only	Sample and Report Only	5-11	5-11	5-11	6.5-9	6.5-9							
Temperature	-	Wastewater: DIN 38 404-4, USEPA 170.1, SM 2550, GB/T 13195 or IS 3025 (Part 9)	Δ+15°C	Δ+10°C	Δ+5°C														
E. Coli	-	Wastewater: SM 9221 B presumptive, confirm positive with SM 9221 F or G	126cfu/100mL																
Colour (436nm; 525nm; 620nm)	-	Wastewater: ISO 7887 B	7;5;3m ⁻¹	5;3;2m ⁻¹	2;1;1m ⁻¹														
Persistent Foam	-	-	No indication of Persistent Foam in receiving water																
Wastewater Flowrate	-	-	15m ³ per day																
Ammonium-N	-	Wastewater: SM 4500 NH3 D	10mg/L	1mg/L	0.5mg/L														
AOX	-	Wastewater: ISO 9562	3mg/L	0.5mg/L	0.1mg/L														
5-Days Biochemical Oxygen Demand (BOD ₅)	-	Wastewater: SM 5210 B	30mg/L	15mg/L	8mg/L														
Chemical Oxygen Demand (COD)	-	Wastewater: SM 5220 D	150mg/L	80mg/L	40mg/L														
Dissolved Oxygen (DO)	-	Wastewater: SM 4500 O G	Sample and Report Only																
Oil & Grease	-	Wastewater: USEPA 1664	10mg/L	2mg/L	0.5mg/L														
Total Phenols / Phenol Index	-	Wastewater: SM 5530 B / C	0.5mg/L	0.01mg/L	0.001mg/L														
Total Chlorine	-	Wastewater: SM 4500 Cl- G	Sample and Report Only																
Total Dissolved Solids (TDS)	-	Wastewater: SM 2540 C	Sample and Report Only																
Total Nitrogen	-	Wastewater: USEPA 351.2	20mg/L	10mg/L	5mg/L														
Total Phosphorus	-	Wastewater: USEPA 6010 C	3mg/L	0.5mg/L	0.1mg/L														
Total Suspended Solids (TSS)	-	Wastewater: SM 2540 D	50mg/L	15mg/L	5mg/L														
% Solids	-	Sludge: USEPA 160.3 at 105°C	-			Sample and Report Only	Sample and Report Only	Sample and Report Only	Sample and Report Only	Sample and Report Only	Sample and Report Only	Sample and Report Only	Sample and Report Only						
Paint Filter Test	-	Sludge: USEPA 9095 B	-			Sample and Report Only	Sample and Report Only	Sample and Report Only	Pass	Pass	Pass	Sample and Report Only							
Fecal Coliform	-	Sludge: USEPA 1681	-			Sample and Report Only	Sample and Report Only	Sample and Report Only	Sample and Report Only	Sample and Report Only	1000MPN/g	1000MPN/g							
Anions																			
Chloride	-	Wastewater: SM 4500 Cl D or E	Sample and Report Only																
Cyanide	-	Wastewater: SM 4500 CN Sludge: USEPA 9014	0.2mg/L	0.1mg/L	0.05mg/L	Sample and Report Only	Sample and Report Only	100mg/kg	85mg/kg	70mg/kg	70mg/kg	70mg/kg							
Sulfate	-	Wastewater: SM 4500 SO42- E	Sample and Report Only																
Sulfide	-	Wastewater: SM 4500 S2- D	0.5mg/L	0.05mg/L	0.01mg/L														
Sulfite	-	Wastewater: SM 4500 SO32- C	2mg/L	0.5mg/L	0.2mg/L														

TEST PARAMETERS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

ITEMS	CAS No.	METHODS	WASTEWATER			SLUDGE							LEACHATE							
			Foundational	Progressive	Aspirational	Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G	Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G	
Metals																				
Total Antimony (Sb)	7440-36-0	Wastewater: USEPA 6010 C Sludge: USEPA 3050 Leachate: Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 6010 C	0.1mg/L	0.05mg/L	0.01mg/L	-	-	-	-	-	-	-	Sample and Report Only	Sample and Report Only	Sample and Report Only	15mg/L	7.8mg/L	0.6mg/L	0.6mg/L	0.6mg/L
Chromium (VI)	7440-47-3, 18540-29-9	Wastewater: ISO 18412 Sludge: USEPA 7196 Leachate: Extraction: USEPA 1311 Analysis: USEPA 7196	0.05mg/L	0.005mg/L	0.001mg/L	-	-	-	-	-	-	50mg/kg	Sample and Report Only	Sample and Report Only	5mg/L	3.75mg/L	2.5mg/L	2.5mg/L	2.5mg/L	
Total Barium (Ba)	7440-39-3	Wastewater: USEPA 6010 C Sludge: USEPA 3050 Leachate: Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 6010 C	Sample and Report Only			-	-	-	-	-	-	Sample and Report Only	Sample and Report Only	Sample and Report Only	100mg/L	67.5mg/L	35mg/L	35mg/L	35mg/L	
Total Selenium (Se)	7782-49-2	Wastewater: USEPA 6010 C Sludge: USEPA 3050 Leachate: Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 6010 C	Sample and Report Only			-	-	-	-	-	-	100mg/kg	Sample and Report Only	Sample and Report Only	1mg/L	0.75mg/L	0.5mg/L	0.5mg/L	0.5mg/L	
Total Tin (Sn)	7440-31-5	Wastewater: USEPA 6010 C	Sample and Report Only			-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Arsenic (As)	7440-38-2	Wastewater: USEPA 6010 C Sludge: USEPA 3050 Leachate: Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 6010 C	0.05mg/L	0.01mg/L	0.005mg/L	-	-	-	-	-	-	-	75mg/kg	Sample and Report Only	Sample and Report Only	5mg/L	2.75mg/L	0.5mg/L	0.5mg/L	0.5mg/L
Total Chromium (Cr)	7440-47-3	Wastewater: USEPA 6010 C Sludge: USEPA 3050 Leachate: Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 6010 C	0.2mg/L	0.1mg/L	0.05mg/L	-	-	-	-	-	-	3000mg/kg	Sample and Report Only	Sample and Report Only	15mg/L	10mg/L	5mg/L	5mg/L	5mg/L	
Total Cobalt (Co)	7440-48-4	Wastewater: USEPA 6010 C Sludge: USEPA 3050 Leachate: Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 6010 C	0.05mg/L	0.02mg/L	0.01mg/L	-	-	-	-	-	-	Sample and Report Only	Sample and Report Only	Sample and Report Only	80mg/L	80mg/L	80mg/L	80mg/L	80mg/L	
Total Cadmium (Cd)	7440-43-9	Wastewater: USEPA 6010 C Sludge: USEPA 3050 Leachate: Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 6010 C	0.1mg/L	0.05mg/L	0.01mg/L	-	-	-	-	-	-	85mg/kg	Sample and Report Only	Sample and Report Only	1mg/L	0.58mg/L	0.15mg/L	0.15mg/L	0.15mg/L	
Total Copper (Cu)	7440-50-8	Wastewater: USEPA 6010 C Sludge: USEPA 3050 Leachate: Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 6010 C	1mg/L	0.5mg/L	0.25mg/L	-	-	-	-	-	-	4300mg/kg	Sample and Report Only	Sample and Report Only	25mg/L	17.5mg/L	10mg/L	10mg/L	10mg/L	
Total Lead (Pb)	7439-92-1	Wastewater: USEPA 6010 C Sludge: USEPA 3050 Leachate: Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 6010 C	0.1mg/L	0.05mg/L	0.01mg/L	-	-	-	-	-	-	840mg/kg	Sample and Report Only	Sample and Report Only	5mg/L	2.75mg/L	0.5mg/L	0.5mg/L	0.5mg/L	
Total Nickel (Ni)	7440-02-0	Wastewater: USEPA 6010 C Sludge: USEPA 3050 Leachate: Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 6010 C	0.2mg/L	0.1mg/L	0.05mg/L	-	-	-	-	-	-	420mg/kg	Sample and Report Only	Sample and Report Only	20mg/L	11.75mg/L	3.5mg/L	3.5mg/L	3.5mg/L	
Total Silver (Ag)	7440-22-4	Wastewater: USEPA 6010 C Sludge: USEPA 3050 Leachate: Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 6010 C	0.1mg/L	0.05mg/L	0.005mg/L	-	-	-	-	-	-	Sample and Report Only	Sample and Report Only	Sample and Report Only	5mg/L	5mg/L	5mg/L	5mg/L	5mg/L	
Total Zinc (Zn)	7440-66-6	Wastewater: USEPA 6010 C Sludge: USEPA 3050 Leachate: Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 6010 C	5mg/L	1mg/L	0.5mg/L	-	-	-	-	-	-	7500mg/kg	Sample and Report Only	Sample and Report Only	250mg/L	150mg/L	50mg/L	50mg/L	50mg/L	
Total Mercury (Hg)	7439-97-6	Wastewater: USEPA 245.1, USEPA 6020 A Sludge: USEPA 7471 B Leachate: Extraction: USEPA 1311 of USEPA 3051 A Analysis: USEPA 7471 B Leachate Extraction: USEPA 1311 or USEPA 3051 A Analysis: USEPA 7471 B	0.01mg/L	0.005mg/L	0.001mg/L	-	-	-	-	-	-	57mg/kg	Sample and Report Only	Sample and Report Only	0.2mg/L	0.125mg/L	0.05mg/L	0.05mg/L	0.05mg/L	
Total Boron (B)	7440-42-8	Wastewater: USEPA 6010 C	-			-							-							

TEST PARAMETERS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

ITEMS	CAS No.	METHODS	WASTEWATER			SLUDGE						LEACHATE						
			Foundational	Progressive	Aspirational	Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G	Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F
Alkylphenol (AP) & Alkylphenol Ethoxylates (APEOs)																		
NP / OP	-	Wastewater: With reference to ISO 18857-2 (Modified dichloromethane extraction) (GC-MS or LC-MS(-MS)) Sludge: With reference to USEPA 3540 / 3541 - Soxhlet or USEPA 3550 – Ultrasonic Analysis: With reference to ISO 18857-2	5µg/L	Sample and Report Only	Sample and Report Only	Sample and Report Only	0.4mg/kg	0.4mg/kg	0.4mg/kg	0.4mg/kg								
NPEO / OPEO	-	Wastewater: With reference to ISO 18857-2 (GC-MS or LC-MS(-MS)) Sludge: Preparation: With reference to USEPA 3540 / 3541 - Soxhlet or USEPA 3550 – Ultrasonic Analysis: ISO 18857-2	5µg/L	Sample and Report Only	Sample and Report Only	Sample and Report Only	0.4mg/kg	0.4mg/kg	0.4mg/kg	0.4mg/kg								
Anti-Microbials & Biocides																		
o-Phenylphenol (+salts)	90-43-7	Wastewater: USEPA 8270 E	100µg/L				-											
Triclosan	3380-34-5	Wastewater: USEPA 8270 E	100µg/L				-											
Permethrin	Multiple	Wastewater: USEPA 8270 E	500µg/L				-											
Chlorinated Paraffins																		
Medium-chain Chlorinated Paraffins (MCCPs) (C14-C17)	85535-85-9	Wastewater: With reference to ISO 18219-2:2021 or Method for MCCP with GC-MS(INC) or LC-MS/MS	500µg/L				-											
Short-chain Chlorinated Paraffin (SCCPs) (C10-C13)	85535-84-8	Wastewater: With reference to ISO 18219-2:2021 or Method for MCCP with GC-MS(INC) or LC-MS/MS	25µg/L				-											
Chlorobenzenes & Chlorotoluenes																		
		Wastewater: With reference to USEPA 8260 D Sludge: With reference to USEPA 8270 E	0.2µg/L	Chlorotoluenes: Sample and Report Only	Chlorotoluenes: Sample and Report Only	Chlorotoluenes: Sample and Report Only	Chlorotoluenes: 0.2mg/kg	Chlorotoluenes: 0.2mg/kg	Chlorotoluenes: 0.2mg/kg	Chlorotoluenes: 0.2mg/kg								
Chlorophenols																		
		Wastewater: With reference to USEPA 8270 E or Solvent extraction, derivatization with KOH, acetic anhydride, followed by GC-MS	0.5µg/L				-											
Dimethyl Formamide (DMFa)																		
	68-12-2	Wastewater: With reference to USEPA 8270 E	1000µg/L				-											
Dyes - Carcinogenic or Equivalent Concern																		
		Wastewater: With reference to Liquid extraction followed by LC-MS	500µg/L				-											
Dyes - Disperse (Allergenic)																		
		Wastewater: With reference to Liquid extraction followed by LC-MS	50µg/L				-											
Dyes - Navy Blue Colourant																		
		Wastewater: With reference to Liquid extraction followed by LC-MS	500µg/L				-											
Flame Retardants																		
		Wastewater: Boric acid, Diboron trioxide, Disodium octaborate, Disodium tetraborate anhydrous, Tetraboron disodium heptaoxide hydrate: ISO 17294, USEPA 6010, C Others: With reference to USEPA 8270 E or Dichloromethane extraction followed by GC-MS or LC-MS(-MS)	Boric acid, Diboron trioxide, Disodium octaborate, Disodium tetraborate anhydrous, Tetraboron disodium heptaoxide hydrate: 100µg/L Others: 25µg/L				-											

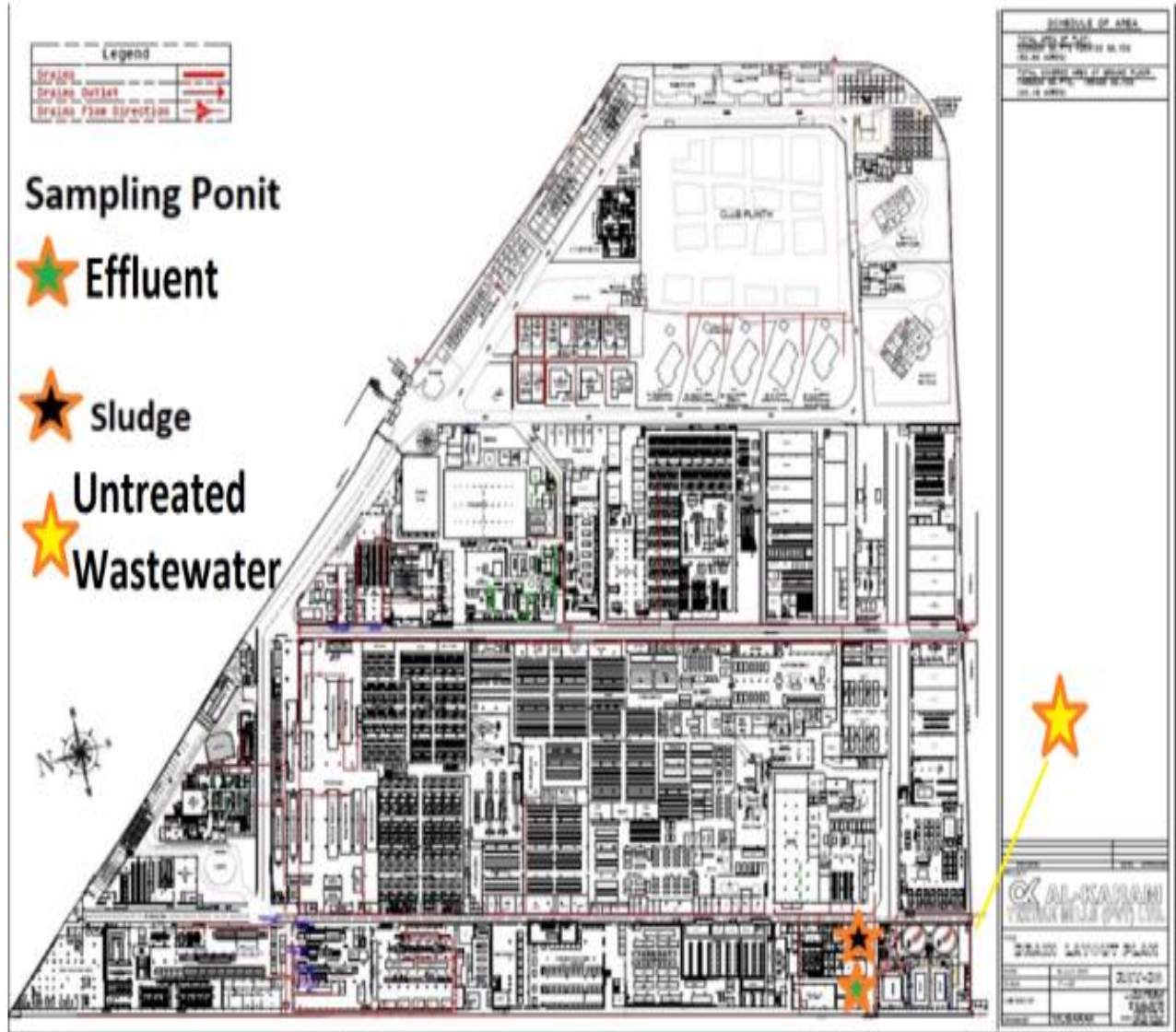
TEST PARAMETERS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

ITEMS	CAS No.	METHODS	WASTEWATER			SLUDGE						LEACHATE							
			Foundational	Progressive	Aspirational	Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G	Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G
Glycols / Glycol Ethers		Wastewater: With reference to USEPA 8270 E or Liquid extraction followed by LC-MS or GC-MS	50µg/L																
Halogenated Solvents		Wastewater: With reference to USEPA 8260 D. Purge and Trap or Headspace followed by GC-MS	1µg/L																
Organotin Compounds		Wastewater: TeET: With reference to ISO 17353 Others: With reference to ISO 17353 or Derivatization with NaB(C ₂ H ₅) ₄ followed by GC-MS	0.01µg/L																
Other/Miscellaneous Chemicals																			
AEPA [2-(2-aminoethylamino) ethanol]	111-41-1	Wastewater: With reference to Liquid extraction followed by LC-MS/MS	500µg/L																
Bisphenol A	80-05-7	Wastewater: With reference to Liquid extraction followed by LC-MS/MS	10µg/L																
Thiourea	62-56-6	Wastewater: With reference to Liquid extraction followed by LC-MS/MS	50µg/L																
Quinoline	91-22-5	Wastewater: With reference to Liquid extraction followed by LC-MS/MS	50µg/L																
Borate, zinc salt	12767-90-7	Wastewater: USEPA 6010 C	100µg/L																
Perfluorinated and Polyfluorinated Chemicals (PFCs)		Wastewater: With reference to USEPA 537:2020 followed by LC-MS(-MS)	PFOS and related substances: 0.01µg/L PFOA: 0.01µg/L PFOA related substances: 1µg/L																
Phthalates		Wastewater: With reference to USEPA 8270 E or Dichloromethane extraction followed by GC-MS	10µg/L																
Polycyclic Aromatic Hydrocarbons (PAHs)		Wastewater: With reference to USEPA 8270 E or Solvent extraction followed by GC-MS Sludge: With reference to USEPA 8270 E	1µg/L	Sample and Report Only	Sample and Report Only	Sample and Report Only	0.2mg/kg	0.2mg/kg	0.2mg/kg	0.2mg/kg									
Restricted Aromatic Amines (Cleavable from Azo-colourants)		Wastewater: With reference to USEPA 8270 E or Reduction step with sodium dithionite, solvent extraction followed by GC-MS and LC-MS/MS	0.1µg/L																
UV Absorbers		Wastewater: With reference to USEPA 8270 E or Dichloromethane extraction followed by GC-MS or LC-MS(-MS)	100µg/L																
Volatile Organic Compounds (VOCs)																			
Benzene	71-43-2	Wastewater: With reference to USEPA 8260 D.Purge and Trap or Static Headspace followed by GC-MS	1µg/L																
m-cresol / o-cresol / p-cresol	108-39-4 / 94-48-7 / 106-44-5	Wastewater: With reference to USEPA 8260 D.Purge and Trap or Static Headspace followed by GC-MS	1µg/L																
Xylene	1330-20-7	Wastewater: With reference to USEPA 8260 D.Purge and Trap or Static Headspace followed by GC-MS	1µg/L																
Toluene	108-88-3	Wastewater: With reference to USEPA 8260 D.	1µg/L																

PIPING PLAN

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.




SAMPLING PHOTOS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

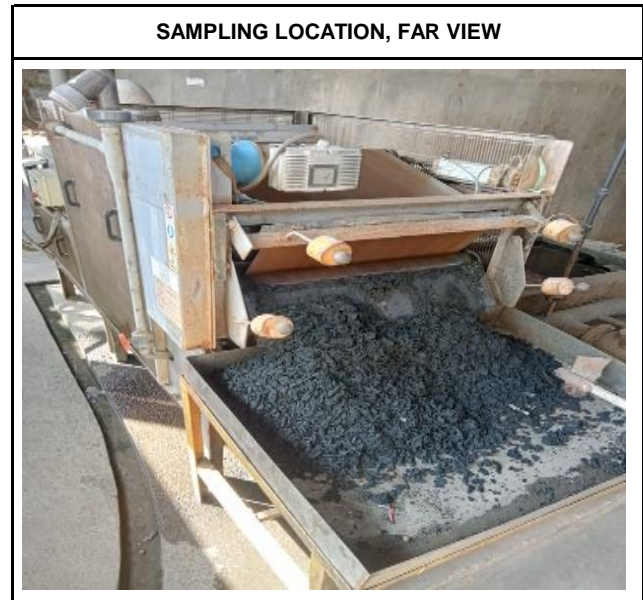
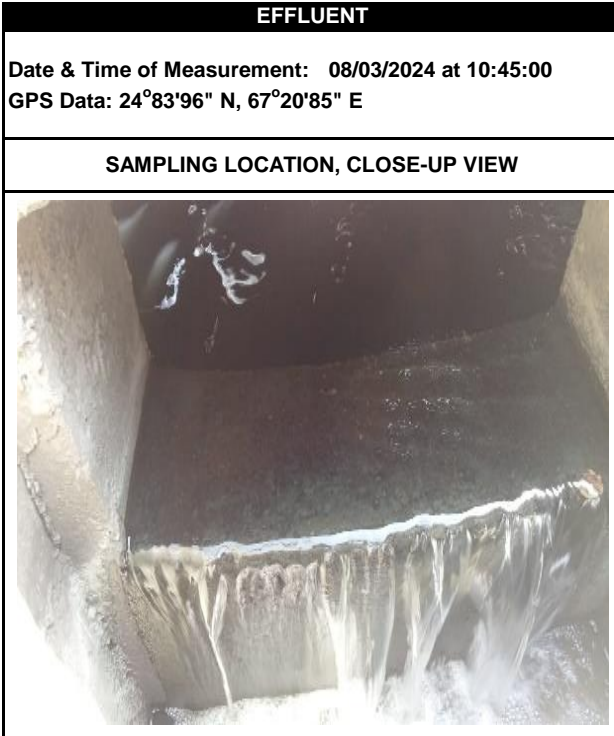
PERSISTENT FOAM
Date & Time of Measurement: 08/03/2024 at 11:00
Sampling Location: Aeration Tank


UNTREATED WASTEWATER
Date & Time of Measurement: 08/03/2024 at 11:00:00 GPS Data: 24°83'31" N, 67°10'93" E
SAMPLING LOCATION, CLOSE-UP VIEW


SAMPLING LOCATION, FAR VIEW


SAMPLING PHOTOS

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
 Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.



ZDHC WASTEWATER SAMPLING FIELD DATA FORM AND REPRESENTATIVE SAMPLE DECLARATION

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
 Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

ZDHC Wastewater Sampling Information:

Factory Name:	M/S: Al Karam Textile Mills (Pvt.) Ltd
Factory Address:	HT-11 Landhi Industrial Area, Karachi, Pakistan.
Sampling Location:	<input checked="" type="checkbox"/> Untreated Wastewater <input checked="" type="checkbox"/> Effluent <input checked="" type="checkbox"/> Sludge
GPS Data:	24o83'31" N, 67o10'93" E, 24o83'96" N, 67o20'85" E, 24o83'95" N, 67o20'86" E
Sampling Date:	08/03/2024
Sampling Time:	09:20 to 16:00
Sample ID:	AFTER TREATMENT, BEFORE TREATMENT, SLUDGE

Sampler Information:

Sampler Name:	HAMZA LIAQUAT
Sampler E-mail:	Hamza.Liaquat@sgs.com
ZDHC Sampler Accreditation Cert. No.:	C74D106818359

Sampling Method:

- Grab
 6-hour Composite
 Others, please specify: _____
 Autosampler
 Manual

Discharge Method:

- Direct
 Indirect (w/pretreatment)
 Indirect (w/o pretreatment)
 Zero Liquid Discharge (ZLD)

ZDHC Wastewater Sampling Field Testing QA/QC

ZDHC Wastewater Sampling Field Testing QA/QC					
Parameter	LCS Known	-	LCS Measured	-	Accuracy %
pH	6 TO 7	-	-	-	-
Total Chlorine	ND	-	-	-	-

ZDHC Wastewater Flow Device Dimensions

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

ZDHC Wastewater Sample Collection Field Test Measurements

ZDHC Wastewater Sample Collection Field Test Measurements										
Sampling Time (Hours)	Temp (°C)		pH	Visible Colour	Persistent Foam (Yes/No)	Dissolved Oxygen (mg/L)	Total Chlorine (mg/L)	Wastewater Flow Meter (m ³ /hr)	Alternate Measured Flow	
	Wastewater Discharge	Receiving Water							Depth (cm)	Velocity (cm/s)
10:45	25.4	No Access	6 to 7	Light Grey	NO	1.9	ND	170	-	-
11:30	25.9	-	6 to 7	Light Grey	NO	-	ND	-	-	-
12:15	26.2	-	6 to 7	Light Grey	NO	-	ND	-	-	-
13:00	26.5	-	6 to 7	Light Grey	NO	-	ND	-	-	-
13:45	26.7	-	6 to 7	Light Grey	NO	-	ND	-	-	-
14:30	26.2	-	6 to 7	Light Grey	NO	-	ND	-	-	-
15:15	26.8	-	6 to 7	Light Grey	NO	-	ND	-	-	-
16:00	25.9	-	6 to 7	Light Grey	NO	-	ND	-	-	-
16:45	26.5	-	6 to 7	Light Grey	NO	-	ND	-	-	-
Average	26.2	No Access	6 to 7	Light Grey	NO	1.9	ND	170.0	-	-

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.

Factory Name:	Al Karam Textile Mills (Pvt.) Ltd	Sampler Name:	HAMZA LIAQUAT
Factory Representative Name:	Mr.Ahsan	ZDHC Sampler Accreditation Cert. No.:	C74D106818359
Factory Representative Signature and Stamp:	_____	Sampler Signature:	_____

LOCAL WASTEWATER DISCHARGE REQUIREMENT

REGULATORY REQUIREMENTS BASED ON PAKISTAN: EPA/TECH/739/2014 SINDH ENVIRONMENTAL QUALITY STANDARDS (SEQS)

Factory Name: Al Karam Textile Mills (Pvt.) Ltd
Factory Address: HT-11 Landhi Industrial Area, Karachi, Pakistan.

Paramters	Discharged Waste Water		
	Discharge into Sea water		
		Value	Unit
Temperature Increase*	≤	3	°C
Temperature	<	40	°C
TSS	<	200	mg/L
COD	<	400	mg/L
pH Value (min.)	-	6.0	-
pH Value (max.)	-	9.0	-
BOD (5-day)	<	80**	mg/L
Oil and Grease	<	10	mg/L
Phenol	<	0.3	mg/L
Cyanide	<	1	mg/L
Sulfide	<	1	mg/L
Ammonia (NH ₃)	<	40	mg/L
Total Chromium (Cr)	<	1	mg/L
Total Copper (Cu)	<	1	mg/L
Total Nickel (Ni)	<	1	mg/L
Total Silver (Ag)	<	1	mg/L
Total Zinc (Zn)	<	5	mg/L
Total Arsenic (As)	<	1	mg/L
Total Barium (Ba)	<	1.5	mg/L
Total Selenium (Se)	<	0.5	mg/L
Total Boron (B)	<	6	mg/L
Total Cadmium (Cd)	<	0.1	mg/L
Hexavalent Chromium (Cr-VI)	<	1	mg/L
Total Lead (Pb)	<	0.5	mg/L
Total Mercury (Hg)	<	0.01	mg/L
Total Chlorine	<	1	mg/L
Total Dissolved Solids (TDS)	<	3500	mg/L
Chloride	<	1000	mg/L

*The effluent should not result in temperature increase of more than 3°C at the edge of the zone where initial mixing and dilution take place in the receiving body. In case zone is not defined, use 100 meters from the point of discharge.

** The value for industry is 200 mg/L

***** END OF REPORT *****