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Test Report Number: SHAH01261235

Date	27 Sep, 2020
Date of sampling	16 Sep, 2020

Audit ID	88079	Audit firm	INTERTEK - CHINA NORTH
Company name	HANGZHOU HANGMIN DAMEI DYEING ARRANGMENTS CO., LTD		
Contact person	MR.LU		
Type of tax - tax ID no	91330109782390508A		
Address	HANGMIN INDUSTRY AREA, GUALI TOWN,XIAOSHAN DISTRICT, HANGZHOU CITY,ZHEJIANG PROVINCE, CHINA		
Region state province	ZHEJIANG		
Town city / village	HANGZHOU		
Zip/Post code	215228		

Type of wastewater discharge	
Type of waste discharge	Comments
Direct discharge	
Indirect discharge	Yes, the water is discharged into the sewage system for further treatment on External ETP

Sample description			
Sample description	Simple	Comp	Comments
(1) Waste water before treatment – Global effluent parameter & Heavy Metals & Fourteen hazardous chemicals	[Grey, grab sample at 8:50]		Sample 1 pH: 11.10; Temperature: 47.2 °C

Internal description			
Internal codification number			
Reference sample number	SHAH01261235		
Date of sampling	16 Sep, 2020	Received on	17 Sep, 2020
Analysis carried out from	17 Sep, 2020 to 25 Sep, 2020		
Date of delivery	25 Sep, 2020		

Authorized By:

Greg Wang
Senior Manager

INTERTEK TESTING SERVICES LTD., SHANGHAI 上海天祥质量技术服务有限公司 检验检测专用章

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Summary of test results	
Test items	**Sample 1 (Before treatment)**
Global effluent parameters ZDHC	**D**
Heavy metals	**D**
Alkylphenols (APs) & Alkylphenol ethoxylates (APEOs)	ND
Chlorobenzenes & Chlorotoluenes	ND
Chlorophenols	ND
Azo dyes	**D**
Carcinogenic dyes	ND
Disperse dyes	ND
Brominated flame retardants	ND
Chlorinated flame retardants	ND
Short chain chlorinated paraffins (SCCPs) (C10-C13)	**D**
Glycols	ND
Chlorinated solvents	ND
Organotin compounds	**D**
Phthalates	**D**
Perfluorinated chemicals (PFCs)	ND
Polycyclic aromatic hydrocarbons (PAHs)	ND
VOCs	ND

Note : ND = Not detected
D = Detected *[please specify actual result]*
# = No comment
AT = After treatment
N/A = Not applicable
- = Did not perform
* = See remark
BT = Before treatment

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Tests Conducted

Test results

1. Global effluent parameters

Parameters	Test method	Limit			Result Sample 1 (Before treatment)
		Foundational	Progressive	Aspirational	
Temperature	GB/T 13195-1991 / EPA 170.1	35°C	30°C	25°C	47.2 °C
TSS	GB/T 11901-1989 / EPA 160.2	50 mg/L	15 mg/L	5 mg/L	220 mg/L
COD	HJ 828-2017 / ISO 6060	150 mg/L	80 mg/L	40 mg/L	1.10×10^3 mg/L
Total-N	HJ 636-2012 / ISO 5663	20 mg/L	10 mg/L	5 mg/L	68.0 mg/L
pH	GB/T 6920-1986 / EPA 150.1	6-9	6-9	6-9	11.10
Colour [m^{-1}]	ISO 7887-B	7;5;3	5;3;2	2;1;1	82.8; 71.6; 66.0
BOD_5	HJ 505-2009 / APHA 5210	30 mg/L	15 mg/L	5 mg/L	399 mg/L
Ammonium-N	HJ 535-2009 / ISO 11732	10 mg/L	1 mg/L	0.5 mg/L	8.19 mg/L
Total-P	GB/T 11893-1989 / ISO 11885	3 mg/L	0.5 mg/L	0.1 mg/L	6.50 mg/L
AOX	HJ/T 83-2001 / ISO 9562	5 mg/L	1 mg/L	0.1 mg/L	0.363 mg/L
Oil and grease	HJ 637-2018 / ISO 9377-2	10 mg/L	2 mg/L	0.5 mg/L	278 mg/L
Phenol	HJ 503-2009 / ISO 14402	0.5 mg/L	0.01 mg/L	0.001 mg/L	0.008 mg/L
Coliform	GB/T 5750.12-2006 / ISO 9308-1	400	100	25	75 [bacterial/100 ml]
Foam	/	Not visible	Not visible	Not visible	Not visible
Cyanide	HJ 484-2009 / ISO 6703 / ISO 14403	0.2 mg/L	0.1 mg/L	0.05 mg/L	＜0.020 mg/L
Sulfide	GB/T 16489-1996 / APHA 4500-S2-D	0.5 mg/L	0.05 mg/L	0.01 mg/L	＜0.010 mg/L
Sulfite	HJ 84-2016 / USEPA 377.1 SM 4500 SO3	2 mg/L	0.5 mg/L	0.2 mg/L	＜ 0.184 mg/L
Conductivity	EPA 120.1	N/A	N/A	N/A	6.97×10^3 μS/cm

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Tests Conducted

2. Heavy metals

With reference to ISO 11885, ISO 18412, ISO 12846, ISO 17852, US EPA 200.7, US EPA 200.8, US EPA 6010c, US EPA 6020a, US EPA 218.6 and by Inductively Coupled Argon Plasma-Mass Spectrometry (ICP-MS) analysis.

Heavy metals	CAS no.	Limit			Result Sample 1 (Before treatment)	Detection limit (mg/L)
		Foundational	Progressive	Aspirational		
Total Arsenic (As)	Various	0.05 mg/L	0.01 mg/L	0.005 mg/L	0.003 mg/L	0.001
Total Cadmium (Cd)	Various	0.1 mg/L	0.05 mg/L	0.01 mg/L	0.0001 mg/L	0.0001
Total Mercury (Hg)	Various	0.01 mg/L	0.005 mg/L	0.001 mg/L	ND	0.00005
Total Lead (Pb)	Various	0.1 mg/L	0.05 mg/L	0.01 mg/L	0.003 mg/L	0.001
Total Antimony (Sb)	Various	0.1 mg/L	0.05 mg/L	0.01 mg/L	0.438 mg/L	0.001
Total Cobalt (Co)	Various	0.05 mg/L	0.02 mg/L	0.01 mg/L	0.001 mg/L	0.001
Total Nickel (Ni)	Various	0.2 mg/L	0.1 mg/L	0.05 mg/L	0.010 mg/L	0.001
Total Silver (Ag)	Various	0.1 mg/L	0.05 mg/L	0.005 mg/L	ND	0.001
Total Copper (Cu)	Various	1 mg/L	0.5 mg/L	0.25 mg/L	0.118 mg/L	0.001
Total Zinc (Zn)	Various	5.0 mg/L	1.0 mg/L	0.5 mg/L	0.263 mg/L	0.001
Total Chromium (Cr)	Various	0.2 mg/L	0.1 mg/L	0.05 mg/L	0.011 mg/L	0.001
Total Manganese (Mn)	Various	N/A	N/A	N/A	0.067 mg/L	0.001
Chromium VI (Cr VI)	Various	0.05 mg/L	0.005 mg/L	0.001 mg/L	ND	0.001

Remark : ND = Not detected

3. Alkylphenols (APs) & AlkylphenolEthoxylates (APEOs)

With reference to ISO 18857-2/ASTM D7065, ISO 18254-1/2, and by Gas Chromatography-Mass Spectrometry (GC-MS) and Liquid Chromatography-tandem Mass Spectrometry (LC-MS-MS) analysis.

Alkylphenols (APs) & Alkylphenolethoxylates (APEOs)	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
Octylphenol (OP)	Various	X		ppm	0.005
Nonylphenol (NP)	Various	X		ppm	0.005
Octylphenolethoxylates (OPEOs)	Various	X		ppm	0.005
Nonylphenolethoxylates (NPEOs)	Various	X		ppm	0.005

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4. Chlorobenzenes & Chlorotoluenes

With reference to US EPA 8260B, US EPA 8270D, and by Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

Chlorobenzenes & Chlorotoluenes	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
Chlorobenzene	108-90-7	X		ppm	0.0002
1,2-Dichlorobenzene	95-50-1	X		ppm	0.0002
1,3-Dichlorobenzene 1,4-Dichlorobenzene	541-73-1 106-46-7	X		ppm	0.0002
1,2,3-Trichlorobenzene	87-61-6	X		ppm	0.0002
1,2,4-Trichlorobenzene	120-82-1	X		ppm	0.0002
1,3,5-Trichlorobenzene	108-70-3	X		ppm	0.0002
1,2,3,4-Tetrachlorobenzene	634-66-2	X		ppm	0.0002
1,2,3,5-Tetrachlorobenzene 1,2,4,5-Tetrachlorobenzene	634-90-2 95-94-3	X		ppm	0.0002
Pentachlorobenzene	608-93-5	X		ppm	0.0002
Hexachlorobenzene	118-74-1	X		ppm	0.0002
2-Chlorotoluene	95-49-8	X		ppm	0.0002
3-Chlorotoluene	108-41-8	X		ppm	0.0002
4-Chlorotoluene	106-43-4	X		ppm	0.0002
2,3-Dichlorotoluene	32768-54-0	X		ppm	0.0002
2,4-Dichlorotoluene	95-73-8	X		ppm	0.0002
2,5-Dichlorotoluene	19398-61-9	X		ppm	0.0002
2,6-Dichlorotoluene	118-69-4	X		ppm	0.0002
3,4-Dichlorotoluene	95-75-0	X		ppm	0.0002
3,5-Dichlorotoluene	25186-47-4	X		ppm	0.0002
2,3,4-Trichlorotoluene	7359-72-0	X		ppm	0.0002
2,3,6-Trichlorotoluene	2077-46-5	X		ppm	0.0002
2,4,5-Trichlorotoluene	6639-30-1	X		ppm	0.0002
2,4,6-Trichlorotoluene	23749-65-7	X		ppm	0.0002
3,4,5-Trichlorotoluene	21472-86-6	X		ppm	0.0002
2,3,4,5-Tetrachlorotoluene	76057-12-0	X		ppm	0.0002
2,3,5,6-Tetrachlorotoluene	29733-70-8	X		ppm	0.0002
2,3,4,6-Tetrachlorotoluene	875-40-1	X		ppm	0.0002
Pentachlorotoluene	877-11-2	X		ppm	0.0002

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Tests Conducted

5. Chlorophenols

With reference to EPA 8270D and by Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

Chlorophenols	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
2-Chlorophenol	95-57-8	X		ppm	0.0005
3-Chlorophenol	108-43-0	X		ppm	0.0005
4-Chlorophenol	106-48-9	X		ppm	0.0005
2,3-Dichlorophenol	576-24-9	X		ppm	0.0005
2,4-Dichlorophenol 2,5-Dichlorophenol 2,6-Dichlorophenol 3,5- Dichlorophenol	120-83-2/ 583-78-8/ 87-65-0/ 591-35-5	X		ppm	0.0005
3,4-Dichlorophenol	95-77-2	X		ppm	0.0005
2,4,6-Trichlorophenol	88-06-2	X		ppm	0.0005
2,3,5-Trichlorophenol	933-78-8	X		ppm	0.0005
2,3,6-Trichlorophenol	933-75-5	X		ppm	0.0005
2,4,5-Trichlorophenol	95-95-4	X		ppm	0.0005
3,4,5-Trichlorophenol 2,3,4-Trichlorophenol	609-19-8/ 15950-66-0	X		ppm	0.0005
2,3,4,5-Tetrachlorophenol	4901-51-3	X		ppm	0.0005
2,3,4,6-Tetrachlorophenol	58-90-2	X		ppm	0.0005
2,3,5,6-Tetrachlorophenol	935-95-5	X		ppm	0.0005
Pentachlorophenol (PCP)	87-86-5	X		ppm	0.0005

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Tests Conducted

6. Azo dyes

With reference to EN 14362-1/3, and by Gas Chromatographic - Mass Spectrometric (GC-MS) or and Liquid Chromatography-tandem Mass Spectrometry (LC-MS-MS) analysis.

Azo Dyes	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	X		ppm	0.0001
4,4'-Diaminodiphenylmethane	101-77-9		0.0036	ppm	0.0001
4,4'-Oxydianiline	101-80-4	X		ppm	0.0001
4-Chloroaniline	106-47-8		0.0011	ppm	0.0001
3,3'-Dimethoxybenzidine	119-90-4	X		ppm	0.0001
3,3'-Dimethylbenzidine	119-93-7	X		ppm	0.0001
p-Cresidine	120-71-8	X		ppm	0.0001
2,4,5-Trimethylaniline	137-17-7	X		ppm	0.0001
4,4'-Thiodianiline	139-65-1	X		ppm	0.0001
4-Aminoazobenzene	60-09-3	X		ppm	0.0001
2,4-Diaminoanisole	615-05-4	X		ppm	0.0001
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	X		ppm	0.0001
2,6-Xylidine	87-62-7	X		ppm	0.0001
o-Anisidine	90-04-0	X		ppm	0.0001
2-Naphthylamine	91-59-8	X		ppm	0.0001
3,3'-Dichlorobenzidine	91-94-1	X		ppm	0.0001
4-Aminobiphenyl	92-67-1	X		ppm	0.0001
Benzidine	92-87-5	X		ppm	0.0001
o-Toluidine	95-53-4	X		ppm	0.0001
2,4-Xylidine	95-68-1	X		ppm	0.0001
4-Chloro-o-toluidine	95-69-2	X		ppm	0.0001
2,4-Diaminotoluene	95-80-7	X		ppm	0.0001
o-Aminoazotoluene	97-56-3	X		ppm	0.0001
5-Nitro-o-toluidine	99-55-8	X		ppm	0.0001
Aniline	62-53-3		0.0032	ppm	0.0001

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7. Carcinogenic dyes

By Liquid Chromatography-tandem Mass Spectrometry (LC-MS-MS) analysis.

Carcinogenic dyes	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
C.I. Direct Black 38	1937-37-7	X		ppm	0.5
C.I. Direct Blue 6	2602-46-2	X		ppm	0.5
C.I. Acid Red 26	3761-53-3	X		ppm	0.5
C.I. Basic Red 9	569-61-9	X		ppm	0.5
C.I. Direct Red 28	573-58-0	X		ppm	0.5
C.I. Basic Violet 14	632-99-5	X		ppm	0.5
C.I. Disperse Blue 1	2475-45-8	X		ppm	0.5
C.I. Disperse Blue 3	2475-46-9	X		ppm	0.5
C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5	X		ppm	0.5
C.I. Basic Green 4 (malachite green chloride)	569-64-2	X		ppm	0.5
C.I. Basic Green 4 (malachite green oxalate)	2437-29-8	X		ppm	0.5
C.I. Basic Green 4 (malachite green)	10309-95-2	X		ppm	0.5
Disperse Orange 11	82-28-0	X		ppm	0.5

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Tests Conducted

8. Disperse dyes

By Liquid Chromatography-tandem Mass Spectrometry (LC-MS-MS) analysis.

Disperse dyes	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
Disperse Yellow 1	119-15-3	X		ppm	0.05
Disperse Blue 102	12222-97-8	X		ppm	0.05
Disperse Blue 106	12223-01-7	X		ppm	0.05
Disperse Yellow 39	12236-29-2	X		ppm	0.05
Disperse Orange 37/59/76	13301-61-6	X		ppm	0.05
Disperse Brown 1	23355-64-8	X		ppm	0.05
Disperse Orange 1	2581-69-3	X		ppm	0.05
Disperse Yellow 3	2832-40-8	X		ppm	0.05
Disperse Red 11	2872-48-2	X		ppm	0.05
Disperse Red 1	2872-52-8	X		ppm	0.05
Disperse Red 17	3179-89-3	X		ppm	0.05
Disperse Blue 7	3179-90-6	X		ppm	0.05
Disperse Blue 26	3860-63-7	X		ppm	0.05
Disperse Yellow 49	54824-37-2	X		ppm	0.05
Disperse Blue 35	12222-75-2	X		ppm	0.05
Disperse Blue 124	61951-51-7	X		ppm	0.05
Disperse Yellow 9	6373-73-5	X		ppm	0.05
Disperse Orange 3	730-40-5	X		ppm	0.05
Disperse Blue 35	56524-77-7	X		ppm	0.05

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Tests Conducted

9. Brominated flame retardants

With reference to US EPA 8270, ISO 22032, US EPA 527, EPA 8321B, and by Gas Chromatography - Mass Spectrometry (GC-MS) analysis and Liquid Chromatography-tandem Mass Spectrometry (LC-MS-MS) analysis.

Brominated flame retardants	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
Decabromodiphenyl ether (DecaBDE)	1163-19-5	X		ppm	0.00005
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	X		ppm	0.00005
Octabromodiphenyl ether (OctaBDE)	32536-52-0	X		ppm	0.00005
Tris(1-aziridinyl)phosphine oxide) (TEPA)	545-55-1	X		ppm	0.00005
Polybromobiphenyls (PBBs)	Various	X		ppm	0.00005
Tris(2,3-dibromopropyl) phosphate (TRIS)	126-72-7	X		ppm	0.00005
Polybromodiphenyl ethers (PBDEs)	Various	X		ppm	0.00005
Tetrabromobisphenol A (TBBPA)	79-94-7	X		ppm	0.00005
Bis(2,3-dibromopropyl) phosphate	5412-25-9	X		ppm	0.00005
Hexabromocyclododecane (HBCDD)	3194-55-6	X		ppm	0.00005
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	X		ppm	0.00005

10. Chlorinated flame retardants

With reference to US EPA 8270, ISO 22032, US EPA 527, EPA 8321B, and by Gas Chromatography - Mass Spectrometry (GC-MS) analysis and Liquid Chromatography-tandem Mass Spectrometry (LC-MS-MS) analysis.

Chlorinated flame retardants	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	X		ppm	0.00005
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	X		ppm	0.00005

11. Short chain chlorinated paraffins (SCCPs) (C10 – C13)

With reference to US EPA 8270, ISO 22032, US EPA 527, EPA 8321B, and by Gas Chromatography - Mass Spectrometry (GC-MS) analysis and Liquid Chromatography-tandem Mass Spectrometry (LC-MS-MS) analysis.

Short chain chlorinated paraffins (SCCPs) (C10 – C13)	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
Short chain chlorinated paraffins (SCCPs)	85535-84-8		0.0011	ppm	0.0004

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12. Glycols

With reference to US EPA 8270 and by Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

Glycols	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
Bis(2-methoxyethyl)-ether	111-96-6	X		ppm	0.05
2-ethoxyethanol	110-80-5	X		ppm	0.05
2-ethoxyethyl acetate	111-15-9	X		ppm	0.05
Ethylene glycol dimethyl ether	110-71-4	X		ppm	0.05
2-methoxyethanol	109-86-4	X		ppm	0.05
2-methoxyethylacetate	110-49-6	X		ppm	0.05
2-methoxypropylacetate	70657-70-4	X		ppm	0.05
Triethylene glycol dimethyl ether	112-49-2	X		ppm	0.05

13. Chlorinated solvents

With reference to US EPA 8260B, and by Headspace Gas Chromatography Mass Spectrometric (HS-GC/MS) analysis.

Chlorinated solvents	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
1,2-Dichloroethane	107-06-2	X		ppm	0.001
Methylene chloride	75-09-2	X		ppm	0.001
Trichloroethene	79-01-6	X		ppm	0.001
Tetrachloroethene	127-18-4	X		ppm	0.001
1,1-Dichloroethylene	75-35-4	X		ppm	0.001
cis-1,2-Dichloroethylene	156-59-2	X		ppm	0.001
trans-1,2-Dichloroethylene	156-60-5	X		ppm	0.001
Chloroform	67-66-3	X		ppm	0.001
1,1,1-Trichloroethane	71-55-6	X		ppm	0.001
Carbon tetrachloride	56-23-5	X		ppm	0.001
1,1,2-Trichloroethane	79-00-5	X		ppm	0.001
1,1,1,2-Tetrachloroethane	630-20-6	X		ppm	0.001

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Tests Conducted

14. Organotin compounds

With reference to ISO 17353, and by Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

Organotin compounds	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
Mono-, di-and tri-octyltin derivatives	Various	X		ppm	0.00001
Dibutyltin (DBT)	Various	X		ppm	0.00001
Triclyclohexyltin (TCyHT)	Various	X		ppm	0.00001
Tripropyltin (TPT)	Various	X		ppm	0.00001
Mono-, di-and tri-methyltin derivatives	Various		0.00005	ppm	0.00001
Mono-, di-and tri-butyltin derivatives	Various	X		ppm	0.00001
Mono-, di-and tri-phenyltin derivatives	Various	X		ppm	0.00001

15. Phthalates

With reference to US EPA 8270, DIN 38407-39 and by Gas Chromatography - Mass Spectrometry (GC-MS) analysis.

Phthalates	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
Di-2-ethylhexyl phthalate (DEHP)	117-81-7		0.015	ppm	0.001
Dimethoxyethyl phthalate (DMEP)	117-82-8	X		ppm	0.001
Di-n-octyl phthalate (DNOP)	117-84-0	X		ppm	0.001
Di-iso-decyl phthalate (DIDP)	26761-40-0/ 68515-49-1	X		ppm	0.001
Di-iso-nonyl phthalate (DINP)	28553-12-0/ 68515-48-0	X		ppm	0.001
Di-n-hexyl phthalate (DnHP)	84-75-3	X		ppm	0.001
Dibutyl phthalate (DBP)	84-74-2	X		ppm	0.001
Butyl benzyl phthalate (BBP)	85-68-7	X		ppm	0.001
Dinonyl phthalate (DNP)	84-76-4	X		ppm	0.001
Diethyl phthalate (DEP)	84-66-2	X		ppm	0.001
Di-n-propyl phthalate (DPRP)	131-16-8	X		ppm	0.001
Di-iso-butyl phthalate (DIBP)	84-69-5	X		ppm	0.001
Di-cyclohexyl phthalate (DCHP)	84-61-7	X		ppm	0.001
Di-iso-octyl phthalate (DIOP)	27554-26-3	X		ppm	0.001
1,2-benzenedicarboxylic acid, di-C7-11-branched and linearakyl esters (DHNUP)	68515-42-4	X		ppm	0.001
1,2-benzenedicarboxylic acid, di-C6-11-branched alkyl esters, C7-rich (DIHP)	71888-89-6	X		ppm	0.001
Dimethyl phthalate (DMP)	131-11-3	X		ppm	0.001

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Tests Conducted

16. Perfluorinated chemicals (PFCs)

With reference to DIN 38407-42 (modified), and Liquid Chromatography-tandem Mass Spectrometry (LC-MS-MS) analysis and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

Perfluorinated chemicals (PFCs)	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
Perfluoro-octane-sulfonic acid (PFOS)	432-50-7 1763-23-1 56773-72-3	X		ppm	0.00001
Perfluoro-hexane-sulfonic acid (PFHxS)	3871-99-6 355-46-41	X		ppm	0.00001
Perfluoro-octanoic acid (PFOA)	335-67-1	X		ppm	0.00001
Perfluoro-butane-sulfonic acid (PFBS)	29420-43-3 29420-49-3 375-73-5	X		ppm	0.00001
Perfluoro-hexanoic acid (PFHxA)	307-24-4	X		ppm	0.00001
Perfluoro-heptane-sulfonate (PFHpS)	60270-55-5 375-92-8	X		ppm	0.00001
Perfluor-decane-sulfonic acid (PFDS)	126105-34-8 335-77-3	X		ppm	0.00001
Perfluoro-octane-sulfon-amide (PFOSA)	754-91-6	X		ppm	0.00001
Perfluoro-butanoic acid (PFBA)	375-22-4	X		ppm	0.00001
Perfluoro-pentanoic acid (PFPeA)	2706-90-3	X		ppm	0.00001
Perfluoro-heptanoic acid (PFHpA)	375-85-9	X		ppm	0.00001
Perfluoro-nonanoic acid (PFNA)	375-95-1	X		ppm	0.00001
Perfluoro-undecanoic acid (PFUdA)	4234-23-5 2058-94-8	X		ppm	0.00001
Perfluoro-dodecanoic acid (PFDoA)	307-55-1	X		ppm	0.00001
Perfluoro-tridecanoic acid (PFTrDA)	72629-94-8	X		ppm	0.00001
Perfluoro-tetradecanoic acid (PFTeDA)	376-06-7	X		ppm	0.00001
Perfluoro-3-7-dimethyl octane carboxylate (PF-3,7-DMOA)	172155-07-6	X		ppm	0.00001
7H-Dodecafluoro heptane carboxylate (HPFHpA)	1546-95-8	X		ppm	0.00001
2H,2H,-Perfluorodecanoic acid (H2PFDA)	-	X		ppm	0.00001
2H,2H,3H,3H-Perfluoro-undecanoicacid (4HPFUnA)	34598-33-9	X		ppm	0.00001
1H,1H,2H,2H-Perfluorooctyl acrylate (6:2 FTA)	17527-29-6	X		ppm	0.00001
1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)	27905-45-9	X		ppm	0.00001
1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA)	17741-60-5	X		ppm	0.00001

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To be continued

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Perfluorinated chemicals (PFCs)	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
1H,1H,2H,2H-Perfluorohexanol (4:2 FTOH)	2043-47-2	X		ppm	0.00001
1H,1H,2H,2H-Perfluorooctanol (6:2 FTOH)	647-42-7	X		ppm	0.001
1H,1H,2H,2H-Perfluorodecanol (8:2 FTOH)	678-39-7	X		ppm	0.001
1H,1H,2H,2H-Perfluorododecanol (10:2 FTOH)	865-86-1	X		ppm	0.00001
N-Methyl-perfluoro-octane-sulfon-amido-ethanol (N-Me-FOSE alcohol)	24448-09-7	X		ppm	0.00001
N-Ethyl-Perfluoro-octane-sulfon-amido-ethanol (N-Et-FOSE alcohol)	1691-99-2	X		ppm	0.00001
N-Methyl-perfluoro-octane-sulfon-amide (N-Me-FOSA)	31506-32-8	X		ppm	0.00001
N-Ethyl-perfluoro-octane-sulfon-amide (N-Et-FOSA)	4151-50-2	X		ppm	0.00001
Perfluoro-decanoic acid (PFDA)	335-76-2	X		ppm	0.00001

17. Polycyclic aromatic hydrocarbons (PAHs)

With reference to US EPA 8270, DIN 38407-39 and by Gas Chromatography - Mass Spectrometry (GC-MS) analysis.

Polycyclic aromatic hydrocarbons (PAHs)	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
Benzo(a)pyrene (BaP)	50-32-8	X		ppm	0.0001
Anthracene	120-12-7	X		ppm	0.0001
Pyrene	129-00-0	X		ppm	0.0001
Benzo(ghi)perylene	191-24-2	X		ppm	0.0001
Benzo(e)pyrene	192-97-2	X		ppm	0.0001
Indeno (1,2,3-cd)pyrene	193-39-5	X		ppm	0.0001
Benzo(j)fluoranthene	205-82-3	X		ppm	0.0001
Benzo(b)fluoranthene	205-99-2	X		ppm	0.0001
Fluoranthene	206-44-0	X		ppm	0.0001
Benzo(k)fluoranthene	207-08-09	X		ppm	0.0001
Acenaphthylene	208-96-8	X		ppm	0.0001
Phenanthrene	85-01-8	X		ppm	0.0001
Fluorene	86-73-7	X		ppm	0.0001
Naphthalene	91-20-3	X		ppm	0.0001

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Tests Conducted

18. Volatile organic compounds (VOCs)

With reference to ISO 11423-1, and by Headspace Gas Chromatography Mass Spectrometric (HS-GC/MS) analysis.
With reference to US EPA 8270D, and by Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

Volatile organic compounds (VOCs)	CAS no.	Result Sample 1 (Before treatment)		Unit	Reporting limit
		No detection	Detected value		
Benzene	71-43-2	X		ppm	0.001
Xylene	1330-20-7	X		ppm	0.001
o-cresol	95-48-7	X		ppm	0.001
p-cresol	106-44-5	X		ppm	0.001
m-cresol	108-39-4	X		ppm	0.001

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Tests Conducted

Factory Entrance

Photo of before Treatment Area

Photo of Sampling Point (before Treatment)

Photo of Sample (before Treatment)

Testing period: From 17 Sep, 2020 to 25 Sep, 2020

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End of report

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