



TEST REPORT

Technical Report

Date Received

(2016)270-0001-R1-A-C1

Sep 26, 2016

Oct 21, 2016

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Factory Company Name: 5202
Project No.: /
Client Reference No.: /
Sample Type: Wastewater - Time-Weighted Composite Grab Samples*
Sample Pick Up Date: 09/23/2016
Test Period: 09/26/2016 – 10/21/2016

Discharge Option: Indirect Discharge (into a communal ETP)

Sample Description: Sample(s) received is/are stated to be:
I001) Colourless liquid - Fresh Water
I002) Ashy liquid - Raw Waste Water

REMARK

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

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This report shown the test result of the auxiliary chemical and/or raw material samples, which collected during particular factory audit. The results of this report shall not be used for any regulatory compliance purposes.

* The sampling is agreed with client.

Bureau Veritas Korea Co., Ltd.
Consumer Product Services

Sun Ah Kim

Director, General / Bureau Veritas Korea CPS

Photo of the Sample/ Sampling Location





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Executive Summary

Conventional Parameters	I001	I002
1B) Conventional Parameters –METALS	●	●

ZDHC MRSL Substances	I001	I002
2A) APs and APEOs	●	o
2B) Chlorobenzenes and Chlorotoluenes	o	o
2C) Chlorophenols	o	o
2D) Azo Dyes	o	o
2E) Carcinogenic Dyes	o	o
2F) Disperse Dyes	o	o
2G) Flame Retardants	o	o
2H) Glycols	o	o
2I) Halogenated Solvents	o	o
2J) Organotin Compounds	o	o
2K) Perfluorinated and Polyfluorinated	o	o
2L) Phthalates	o	o
2M) Poly Aromatic Hydrocarbons	o	o
2N) Volatile Organic Compounds	o	o

Note / Key :

- ● – Detected
- o – Not Detected



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Objective

The environment samples were tested for below parameters.

- 1B) Conventional Parameters – METALS
- 2A) APs and APEOs
- 2B) Chlorobenzenes and Chlorotoluenes
- 2C) Chlorophenols
- 2D) Azo Dyes
- 2E) Carcinogenic Dyes
- 2F) Disperse Dyes
- 2G) Flame Retardants
- 2H) Glycols
- 2I) Halogenated Solvents
- 2J) Organotin Compounds
- 2K) Perfluorinated and Polyfluorinated Chemicals
- 2L) Phthalates
- 2M) Poly Aromatic Hydrocarbons
- 2N) Volatile Organic Compounds

Sampling Plan

Basically, three environment samples were sampled per factory, including 1) Fresh Water; 2) Raw Waste Water, and 3) Sludge, for the factory which discharge into a communal ETP (Option 1 – Indirect discharge). And four environment samples were sampled per factory, including 1) Fresh Water; 2) Raw Waste Water, 3) Treated Waste Water, and 4) Sludge for the factory which discharge into factory owned ETP (Option 2 – Direct discharge). Total number of sample collected will be depended on the actual factory facilities and manufacturing processes.

Method of sampling used is time-weighted composite grab samples (agreed with client.). 8-hours time-weighted mixed with grab sample is taken every 1 hour over a period of 8 hours. The sampling time would be carried out during day time, preferably between 10 a.m. to 4 p.m, the factory must operate normally in the am session. The aims to see the snapshot of water quality characteristics of the operating factories. They will not provide any information about the concentrations outside that point in time.

Remark :

- Sampling & Preservation procedure is with reference to below standards:
 - 1) Standard Methods for the Examination of Water and Wastewater, 21st edition, Method 1060, Collection and Preservation of Samples.
 - 2) ISO 5667- 1, 3, 10, 13 and 15 Water quality- Sampling - Guidance for the preservation and handling of water samples.
- Field data records are attached in Appendix B.



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Test Result

1B) Conventional Parameters - METALS

Heavy Metals	I001	I002
Arsenic (As)	ND	1.09
Cadmium (Cd)	ND	ND
Mercury (Hg)	0.08	0.11
Lead (Pb)	ND	1.1
Antimony (Sb)	2.6	440
Cobalt (Co)	ND	1.9
Nickel (Ni)	ND	2.7
Copper (Cu)	ND	47
Zinc (Zn)	14	81
Chromium (Cr)	ND	26
Chromium VI (Cr VI)	ND	ND
Silver (Ag)	ND	ND

2A) APs and APEOs

APs and APEOs	I001	I002
OP	ND	ND
NP	ND	ND
OP1EO	ND	ND
OPEO (2-16)	ND	ND
NP1EO	ND	ND
NPEO (2-18)	17	ND

Note : The test was conducted by subcontractor – Bureau Veritas Consumer Products Services (Shanghai)

Others Priority Chemical Groups

	I001	I002
2B) Chlorobenzenes and Chlorotoluenes	ND	ND
2C) Chlorophenols	ND	ND
2D) Azo Dyes	ND	ND
2E) Carcinogenic Dyes	ND	ND
2F) Disperse Dyes	ND	ND
2G) Flame Retardants	ND	ND
2H) Glycols	ND	ND
2I) Halogenated Solvents	ND	ND
2J) Organotin Compounds	ND	ND
2K) Perfluorinated and Polyfluorinated Chemicals	ND	ND
2L) Phthalates	ND	ND
2M) Poly Aromatic Hydrocarbons	ND	ND
2N) Volatile Organic Compounds	ND	ND

Remark :

- Test method, reporting limit and list of chemical are summarized in tables of Appendix A.
- ND = Not detected (Please refer to reporting limit shown in Appendix A.).
- All results are in ppb as unit.
- ppb = part(s) per billion.



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APPENDIX A

Conventional parameters

List of Conventional Parameters – METALS :					
No.	Test Method			Reporting Limit	Unit
Others : With reference to acid digestion with ICP analysis. Cr VI : With reference to solvent extraction and derivatisation followed by UV-Vis analysis.			Cd: 0.1; Hg: 0.05; Each (Others): 1		ppb
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Arsenic (As)	7440-38-2	7	Nickel (Ni)	7440-02-0
2	Cadmium (Cd)	7440-43-9	8	Copper (Cu)	7440-50-8
3	Mercury (Hg)	7439-97-6	9	Zinc (Zn)	7440-66-6
4	Lead (Pb)	7439-92-1	10	Chromium (Cr)	7440-47-3
5	Antimony (Sb)	7440-36-0	11	Chromium VI (Cr VI)	18540-29-9
6	Cobalt (Co)	7440-48-4	12	Silver (Ag)	7440-22-4



ZDHC MRS� Substances

List of Alkylphenols and Alkylphenol Ethoxylates :					
Test Method			Reporting Limit		Unit
Alkylphenols : With reference to ISO 18857-2 (Modified with DCM extraction). Alkylphenol Ethoxylates : With reference to ISO 18857-2. Followed by GC/MS or LC/MS analysis			Each (OP & NP): 1 Each (OPEOs & NPEOs): 5		ppb
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Octylphenol (OP)	Various (140-66-9, 27193-28-8, 1806-26-4)	4	Nonylphenol (NP)	Various (25154-52-3, 104-40-5, 84852-15-3, 11066-49-2)
2	Octylphenol monoethoxylates (OP1EO)	Various	5	Nonylphenol monoethoxylates (NP1EO)	Various
3	Octylphenoethoxylates, (n=2 to n=16)	Various (9002-93-1, 9036-19-5, 68987-90-6)	6	Nonylphenoethoxylates, (n=2 to n=18)	Various (9016-45-9, 26027-38-3, 127087-87-0, 37205-87-1, 68412-54-4)

List of Chlorobenzenes :						
No.	Test Method			Reporting Limit		Unit
With reference to U. S. EPA 8260B and U. S. EPA 8270D. (DCM extraction, followed by GC/MS analysis)			Each: 0.2		ppb	
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.	
Dichlorobenzenes		Various	6	1,3,5-Trichlorobenzene	108-70-3	
1	1,2-Dichlorobenzene	95-50-1	Tetrachlorobenzenes		Various	
2	1,3-Dichlorobenzene	541-73-1	7	1,2,3,4-Tetrachlorobenzene	634-66-2	
3	1,4-Dichlorobenzene	106-46-7	8	1,2,3,5-Tetrachlorobenzene	634-90-2	
Trichlorobenzenes		Various	9	1,2,4,5-Tetrachlorobenzene	95-94-3	
4	1,2,3-Trichlorobenzene	87-61-6	10	Pentachlorobenzene	608-93-5	
5	1,2,4-Trichlorobenzene	120-82-1	11	Hexachlorobenzene	118-74-1	

List of Chlorotoluenes :						
No.	Test Method			Reporting Limit		Unit
With reference to U. S. EPA 8260B and U. S. EPA 8270D. (DCM extraction, followed by GC/MS analysis)			Each: 0.2		ppb	
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.	
1	2-Chlorotoluene, 3-Chlorotoluene, 4-Chlorotoluene	95-49-8, 108-41-8, 106-43-4	4	2,3,6-Trichlorotoluene	2077-46-5	
2	2,3-Dichlorotoluene, 3,4-Dichlorotoluene	32768-54-0, 95-75-0	5	2,4,5-Trichlorotoluene	6639-30-1	
3	2,4-Dichlorotoluene, 2,5-Dichlorotoluene, 2,6-Dichlorotoluene	95-73-8, 19398-61-9, 118-69-4	6	Pentachlorotoluene	877-11-2	

List of Chlorophenols :						
No.	Test Method			Reporting Limit		Unit
With reference to U. S. EPA 8270D. (Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC/MS analysis)				Each: 0.5		ppb
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.	
1	Pentachlorophenol (PCP)	87-86-5		Dichlorophenol (DiCP)	Various	
			10	2,3-Dichlorophenol	576-24-9	
2	2,3,4,5-Tetrachlorophenol	4901-51-3	11	3,4-Dichlorophenol	95-77-2	
3	2,3,4,6-Tetrachlorophenol	58-90-2	12	2,4-Dichlorophenol	120-83-2	
4	2,3,5,6-Tetrachlorophenol	935-95-5	13	2,5-Dichlorophenol	583-78-8	
	Trichlorophenol (TriCP)	Various	14	2,6-Dichlorophenol	87-65-0	
5	2,4,6-Trichlorophenol	88-06-2	15	3,5-Dichlorophenol	591-35-5	
6	2,3,5-Trichlorophenol	933-78-8		Mono Chlorophenol (MonoCP)	Various	
7	2,4,5-Trichlorophenol	95-95-4	16	2-Chlorophenol	95-57-8	
8	3,4,5-Trichlorophenol	609-19-8	17	3-Chlorophenol	108-43-0	
9	2,3,4-Trichlorophenol	15950-66-0	18	4-Chlorophenol	106-48-9	

List of Aromatic Amines in Azo Colorants :						
No.	Test Method			Reporting Limit		Unit
With reference to EN 14362. (Reduction step with sodium dithionite, solvent extraction followed by GC/MS and HPLC Analysis)				Each: 0.1		ppb
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.	
1	4-Aminodiphenyl (Biphenyl-4-ylamine or Xenylamine)	92-67-1	13	4,4'-Methylenedi-o-toluidine (3,3'-Dimethyl-4,4'-diaminodiphenylmethane)	838-88-0	
2	Benzidine	92-87-5	14	p-Cresidine (6-Methoxy-m-toluidine)	120-71-8	
3	4-Chloro-o-toluidine	95-69-2	15	4,4'-Methylene-bis-(2-chloroaniline) (2,2'-Dichloro-4,4'-methylene-dianiline)	101-14-4	
4	2-Naphthylamine	91-59-8	16	4,4'-Oxydianiline	101-80-4	
5	o-Aminoazotoluene (4-Amino-2',3'-dimethylazobenzene or 4-o-tolyazo-o-toluidine)	97-56-3	17	4,4'-Thiodianiline	139-65-1	
6	5-nitro-o-toluidine (2-Amino-4-nitrotoluene)	99-55-8	18	o-Toluidine (2-Aminotoluene)	95-53-4	
7	4-Chloroaniline (p-Chloroaniline)	106-47-8	19	4-Methyl-m-phenylenediamine (2,4-Toluenediamine)	95-80-7	
8	4-Methoxy-m-phenylenediamine (2,4-Diaminoanisole)	615-05-4	20	2,4,5-Trimethylaniline	137-17-7	
9	4,4'-Diaminodiphenylmethane (4,4'-Methylenedianiline)	101-77-9	21	o-Anisidine (2-Methoxyaniline)	90-04-0	
10	3,3'-Dichlorobenzidine (3,3'-Dichlorobiphenyl-4,4'-ylenediamine)	91-94-1	22	4-Aminoazobenzene (p-Aminoazobenzene)	60-09-3	
11	3,3'-Dimethoxybenzidine (o-Dianisidine)	119-90-4	23	2,4-Xylidine (2,4-dimethylaniline)	95-68-1	
12	3,3'-Dimethylbenzidine (4,4'-Bi-o-toluidine)	119-93-7	24	2,6-Xylidine (2,6-dimethylaniline)	87-62-7	

List of Carcinogenic Dyes :					
No.	Test Method			Reporting Limit	Unit
Liquid extraction followed by LC/MS analysis				Each: 5000	ppb
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	C.I. Direct Black 38	1937-37-7	7	C.I. Disperse Blue 1	2475-45-8
2	C.I. Direct Blue 6	2602-46-2	8	C.I. Disperse Blue 3	2475-46-9
3	C.I. Acid Red 26	3761-53-3	9	C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5
4	C.I. Basic Red 9	569-61-9	10	C.I. Basic Green 4 (malachite green chloride), (malachite green oxalate), (malachite green)	569-64-2, 2437-29-8, 10309-95-2
5	C.I. Direct Red 28	573-58-0	11	Disperse Orange 11	82-28-0
6	C.I. Basic Violet 14	632-99-5	-	-	-

List of Disperse Dyes :					
No.	Test Method			Reporting Limit	Unit
Liquid extraction followed by LC/MS analysis				Each: 5000	ppb
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Disperse Yellow 1	119-15-3	11	Disperse Red 17	3179-89-3
2	Disperse Blue 102	12222-97-8	12	Disperse Blue 7	3179-90-6
3	Disperse Blue 106	12223-01-7	13	Disperse Blue 26	3860-63-7
4	Disperse Yellow 39	12236-29-2	14	Disperse Yellow 49	54824-37-2
5	Disperse Orange 37/59/76	13301-61-6	15	Disperse Blue 35	12222-75-2
6	Disperse Brown 1	23355-64-8	16	Disperse Blue 124	61951-51-7
7	Disperse Orange 1	2581-69-3	17	Disperse Yellow 9	6373-73-5
8	Disperse Yellow 3	2832-40-8	18	Disperse Orange 3	730-40-5
9	Disperse Red 11	2872-48-2	19	Disperse Blue 35	56524-77-7
10	Disperse Red 1	2872-52-8	-	-	-

List of Flame Retardants :					
No.	Test Method			Reporting Limit	Unit
With reference to ISO 22032, U. S. EPA 527 and U. S. EPA 8321B. (DCM extraction, followed by GC/MS analysis or LC/MS analysis)				Each (PBBs & PBDEs): 0.05; Each (Others): 0.5; SCCP: 5	ppb
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
Polybromobiphenyls (PBBs)		59536-65-1	12	Octabromodiphenyl ether (OctaBDE)	32536-52-0
1	Monobromobiphenyl (MonoBB)	-	13	Decabromodiphenyl ether (DecaBDE)	1163-19-5
2	Dibromobiphenyl (DiBB)	-	14	Tris(2,3-dibromopropyl) phosphate (TRIS/TDBPP)	126-72-7
3	Tribromobiphenyl (TriBB)	-	15	Tetrabromobisphenol A (TBBPA)	79-94-7
4	Tetrabromobiphenyl (TetraBB)	-	16	Bis(2,3-dibromopropyl) phosphate (BIS/BDBPP)	5412-25-9
5	Pentabromobiphenyl (PentaBB)	-	17	Hexabromocyclododecane (HBCDD)	3194-55-6
6	Hexabromobiphenyl (HexaBB)	-	18	2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0
7	Heptabromobiphenyl (HeptaBB)	-	19	Tris(aziridinyl)-phosphineoxide	545-55-1



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				(TEPA)	
8	Octabromobiphenyl (OctaBB)	-	20	Tris(2-chloroethyl) phosphate (TCEP)	115-96-8
9	Nonabromobiphenyl (NonaBB)	-	21	Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8
10	Decabromobiphenyl (DecaBB)	13654-09-6	22	Short chain chlorinated paraffins (SCCPs)	85535-84-8
11	Pentabromodiphenyl ether (PentaBDE)	32534-81-9	-		

List of Glycols :

No.	Test Method	Reporting Limit		Unit	
With reference to U. S. EPA 8270. (Liquid extraction followed by LC/MS analysis)			Each: 5000	ppb	
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Bis(2-methoxyethyl)-ether	111-96-6	5	2-Methoxyethanol	109-86-4
2	2-Ethoxyethanol	110-80-5	6	2-Methoxyethylacetate	110-49-6
3	2-Ethoxyethyl acetate	111-15-9	7	2-Methoxypropylacetate	70657-70-4
4	Ethylene glycol dimethyl ether	110-71-4	8	Triethylene glycol dimethyl ether	112-49-2

List of Halogenated Solvents :

No.	Test Method	Reporting Limit		Unit	
With reference to U. S. EPA 8260B. (Headspace GC-MS analysis or Purge-and Trap GC/MS analysis)			Each: 1	ppb	
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	1,2-Dichloroethane	107-06-2	3	Trichloroethylene	79-01-6
2	Methylene Chloride	75-09-2	4	Tetrachloroethylene	127-18-4

List of Organotin Compounds :

No.	Test Method	Reporting Limit		Unit	
With reference to ISO 17353. (Solvent extraction, derivatisation with NaB(C ₂ H ₅) ₃ followed by GC/MS analysis)			Each: 0.01	ppb	
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
Mono-, di- and tri-methyltin derivatives		Various	Mono-, di- and tri-phenyltin derivatives		Various
1	Monomethyltin (MMT)		9	Monophenyltin (MPhT)	
2	Dimethyltin (DMT)		10	Diphenyltin (DPhT)	
3	Trimethyltin (TMT)		11	Triphenyltin (TPhT)	
Mono-, di- and tri-butyltin derivatives		Various	Mono-, di- and tri-octyltin derivatives		Various
4	Monobutyltin (MBT)		12	Monooctyltin (MOT)	
5	Dibutyltin (DBT)		13	Diocetyl tin (DOT)	
6	Tributyltin (TBT)		14	Triocetyl tin (TOT)	
7	Tricyclohexyltin (TCyT)	Various	15	Tetrabutyltin (TeBT)	1461-25-2
8	Tripropyltin (TPT)	Various	-	-	-

List of Perfluorinated and Polyfluorinated Chemicals :

No.	Test Method	Reporting Limit		Unit
With reference to DIN 38407-42 (modified) Ionic PFC : Concentration or direct injection followed by			Each: 0.01; Each (FOTH): 1	ppb



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LC/MS/MS analysis; Non-ionic PFC (FTOH) : derivatisation with acetic anhydride, followed by GC/MS analysis					
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Perfluoro-n-octanoic acid (PFOA)	335-67-1, 335-95-5	4	Perfluoro-n-hexanoic acid (PFHxA)	307-24-4
2	Perfluorobutanesulfonic acid (PFBS)	375-73-5, 29420-49-3, 29420-43-3	5	8:2 FTOH	678-39-7
3	Perfluorooctanesulfonic acid (PFOS)	1763-23-1, 432-50-7	6	6:2 FTOH	647-42-7

List of Phthalates :

No.	Test Method	Reporting Limit		Unit	
With reference to U. S. EPA 8270D or ISO 18846. (DCM extraction, followed by GC/MS analysis or LC/MS analysis)		Each: 1		ppb	
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Butyl benzyl phthalate (BBP)	85-68-7	9	Di-iso-butyl phthalate (DIBP)	84-69-5
2	Dibutyl phthalate (DBP)	84-74-2	10	Di-cyclohexyl phthalate (DCHP)	84-61-7
3	Di-2-ethylhexyl phthalate (DEHP)	117-81-7	11	Di-n-hexyl phthalate (DnHP)	84-75-3
4	Di-n-octyl phthalate (DNOP)	117-84-0	12	Dinonyl phthalate (DNP)	84-76-4
5	Di-iso-nonyl phthalate (DINP)	28553-12-0 & 68515-48-0	13	Di-iso-octyl phthalate (DIOP)	27554-26-3
6	Di-iso-decyl phthalate (DIDP)	26761-40-0 & 68515-49-1	14	Dimethoxyethyl phthalate (DMEP)	117-82-8
7	Diethyl phthalate (DEP)	84-66-2	15	1,2-benzenedicarboxylic acid, di- C7-11-branched and linearalkyl esters (DHNUP)	68515-42-4
8	Di-n-propyl phthalate (DPRP)	131-16-8	16	1,2-benzenedicarboxylic acid, di- C6-8-branched alkyl esters, C7- rich (DIHP)	71888-89-6

List of Poly Aromatic Hydrocarbons :

No.	Test Method	Reporting Limit		Unit	
With reference to DIN 38407-39. (Solvent extraction, followed by GC/MS analysis)		Each: 1		ppb	
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Benzo[a]pyrene (BaP)	50-32-8	10	Benzo[k]fluoranthene	207-08-9
2	Anthracene	120-12-7	11	Acenaphthylene	208-96-8
3	Pyrene	129-00-0	12	Chrysene	218-01-9
4	Benzo[ghi]perylene	191-24-2	13	Dibenz[a,h]anthracene	53-70-3
5	Benzo[e]pyrene	192-97-2	14	Benzo[a]anthracene	56-55-3
6	Indeno[1,2,3-cd]pyrene	193-39-5	15	Acenaphthene	83-32-9
7	Benzo[j]fluoranthene	205-82-3	16	Phenanthrene	85-01-8
8	Benzo[b]fluoranthene	205-99-2	17	Fluorene	86-73-7
9	Fluoranthene	206-44-0	18	Naphthalene	91-20-3

List of Volatile Organic Compounds :

No.	Test Method	Reporting Limit		Unit
With reference to ISO 11423-1. (Headspace GC-MS analysis or		Each: 1		ppb



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Purge-and Trap GC/MS analysis)					
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Benzene	71-43-2	4	p-cresol	106-44-5
2	Xylene	1330-20-7	5	m-cresol	108-39-4
3	o-cresol	95-48-7	-	-	-

Note / Key :

ppb = part(s) per billion




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APPENDIX B

 <p align="center">FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE FOR 11 PRIORITY CHEMICALS</p>	CPSD-AN-00613-DATA 04	
	Issue Date:	19-Oct-16
	Version No.:	6
	Business Line:	Analytical

General Data

Laboratory Sample Number: (2016)270-0001

Client Name: Jack Wolfskin (JD: 192737)

Field Contact Person: Yoo Tae Hwan Phone No: 010-9949-4461

Project (Facility Name and Address): Sun yeop industry / 663-3 sangsoo-ri nam-myun yangjoo-si gyeonggi-do

Sampling Location / Description: Drain inside factory

Sample Identification: Zero discharge with sampling plan

Sample Type: Grab sample

Name of Sampler: Young Sunwoo

Discharge mode: Indirect discharge to sewage treatment plant

Date and time collected: 2016. 09. 23 (AM 09:30 - PM 16:30)

Factory Type: Dyeing

Field Data for wastewater

Field Parameters	pH : -	Temp : -	Color : -
Control No. of field equipment	-	-	-

Analysis Required and Preservation Method

Factory with effluent treatment plant	Yes	No		
Sample matrix	<input checked="" type="checkbox"/> Incoming water			
	<input checked="" type="checkbox"/> Wastewater before treatment			
	<input type="checkbox"/> Wastewater after treatment – water at discharge point			
Sampler container number	JWSK-BS-01			
Recording time	AM 09:30 - PM 16 : 30			
Total volume collected	16 L Remark: Total volume collected must be greater than total of sample size required			
Tests	Test required	Total of sample size	Type of container	Preservation method
1. Phthalate	1 L	500 mL	Amber Glass, wash with nitric acid, rinse thoroughly with distilled water and dry before use	Without adding acid Store sample at 4°C
2. Brominated and chlorinated Flame retardant, Flame retardant, SCCPs	1 L	500 mL		
3. Banned Azodyes	1 L	500 mL		
4. Organotin Compounds	1 L	500 mL		
5. Dyes-disperse	1 L	10 mL		
6. Dyes-Carcinogenic	1 L	500 mL		
7. Chlorobenzenes	1 L	500 mL	Amber Glass, wash with nitric acid; Pre-add 6.5 mL of 2M HCl	Acidify to -pH 2 with HCl and store sample at 4°C
8. Chlorophenols	1 L	500 mL		
9. APEOs/APs	1 L	500 mL		
10. Halogenated Solvents	1 L	500 mL		
11. Heavy Metals except CrVI	1 L	500 mL	PE, wash with nitric acid, pre-add 6.5mL of 2M HNO3	Acidify to pH 2 with HNO ₃ and store at 4°C
12. CrVI	1 L	500 mL	Amber Glass, wash with pesticide grade acetone	Fill to full bottle without air nor adding acid and store sample at 4°C
13. PFCs	1 L	500 mL	PE, wash with pesticide grade Acetone;	Without adding acid Store sample at 4°C
14. PAHs	1 L	500 mL	Amber Glass, wash with nitric acid, rinse thoroughly with distilled water and dry before use	Without adding acid Store sample at 4°C
15. Glycols	1 L	500 mL		
16. VOCs	1 L	500 mL		