

# **LS&CO. RESTRICTED SUBSTANCES STEWARDSHIP PROGRAM**

**July 2014**

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# 1. INTRODUCTION

## 1.1 Background

LS&Co. has a goal of eliminating, across its supply chain by 2020, the discharge of priority substances (definition of “priority substance” defined in Appendix 5). This goal requires the Company to understand the current status of our supply chain discharges, investigate root causes, and establish a plan of action. Also required is the clear understanding that many of the Company’s internal departments as well as tiers of supply chain partners will need to implement appropriate control measures for this goal to be achieved. A phased approach is necessary because of the complexity of the issue. Supply chain commitment to continuous improvement is also necessary, so that collaboration and new knowledge can continually strengthen the program and better enable LS&Co. to achieve its goal.

The program will initially focus on areas where the Company has the most control over its supply chain and will engage multiple stakeholders to facilitate progressive implementation of appropriate control measures. At the facility level, the Program complements and supplements the Company’s Terms of Engagement program which has been in place since 1991.

LS&Co. established one of the first apparel and footwear industry Restricted Substances Lists (“RSL”) more than a decade ago. The RSL aims to protect consumers from exposure to priority substances on product. The LS&Co. Restricted Substances Stewardship Program (“RSSP”) creates the foundation to eliminate priority substances from the production processes by supporting our product- focused RSL with a Manufacturing RSL (MRSL). The RSSP identifies elements of a chemical management plan to restrict priority substance use and discharge, and to help ensure a safe and healthful workplace. The RSSP has at its heart a list of eleven categories of priority substances identified by the Joint Roadmap group of companies to which LS&Co. is a signatory with restrictions as set out in Appendix 1. The RSSP requires factories to accord high priority to responsible chemical management and to work closely with chemical suppliers and analytical laboratories so that sound management migrates up the supply chain and that LS&Co. is able to validate the results of implementation. Transparency is an important tool in keeping all stakeholders accountable.

## 1.2 LS&Co. Engagement

LS&Co. is facilitating RSSP program implementation through LS&Co’s internal Go To Market (GTM) processes (research and development, product innovation, product development, sourcing and mass production), as well as initiating external work streams with the many different stakeholders that will help establish appropriate control measures needed to achieve the 2020 goal (chemical suppliers, scientists, and laboratories). The various LS&Co. business staff in design, development, and sustainability, is available to the supply chain as it seeks to achieve the goal of eliminating discharge of priority substances by 2020.

The LS&Co. Restricted Substances Stewardship Program is designed to meet the objectives below:

1. Achieve Company goal of zero discharge of priority substances across all environmental pathways in supply chain by 2020;
2. Establish appropriate management system controls at all levels required to manage chemicals in our supply chain and supply simple and effective tools necessary to implement responsible chemical management systems on-site;
3. Collaborate to establish technical networks to support the work at hand, especially regarding releases, to support root cause analysis and focused elimination effort

- a. Open dialogue with chemical suppliers to understand the status quo
  - b. Identify standard or reliable methods needed to analyze and measure substances
  - c. Work with others to identify, and build where needed, capable laboratory services to support the program
  - d. Understand where there are unknowns and uncertainties, and develop plans to progress in these areas ( see Further Actions);
4. Monitor and demonstrate progress towards the goal, and support related transparency initiatives. Identify suitable public disclosure platforms for transparency initiatives and use them effectively.

### **1.3 Activities Initiated by LS&Co.**

Although the current content of this Guidebook is largely focused on production processes and supply chain, it is important to note that LS&Co. has supported the RSSP program by taking the following actions:

- A study of supply chain priority substance discharges
- Expert consultation on the state of play of priority substances in apparel and footwear
- Continual improvement in our approach to product design, product development and production in order to achieve more control in mass production; i.e., in the supply chain

Our early conclusions on our work to date are:

- There is a need to work with key stakeholder groups to achieve common standards and controls in upstream chemical management issues
- There is a need to work with scientific stakeholders to obtain rigorous standards/procedures and services for the measurement of priority substances within chemicals and in environmental media

This work is taking place on a parallel track with the supply chain implementation outlined herein.

### **1.4 Principles**

The LS&Co. RSSP requires that LS&Co. vendors embrace several important principles:

1. Suppliers shall be committed to ethical conduct and continual improvement in workplace health and safety, consumer safety and environmental protection;
2. Stakeholders shall incorporate the Precautionary Principle (as defined in Appendix 5) as they evaluate chemicals and materials used in their workplace;
3. Stakeholders shall agree to the goal of eliminating discharge of priority substances(as defined in Appendix 5) by 2020;
4. Stakeholders shall commit to transparency and community Right-to-Know
5. Development and adoption of best available technique (as defined in Appendix 5) and substitution for priority substances which will facilitate achievement of the zero discharge goals

## **2. PROGRAM CONTROLS**

### **2.1 Internal audit**

Internal audit, and identification of non-conformities, preventive and corrective actions and reviews will be carried out by LS&Co. Sustainability staff and delegates (external monitors) as part of the LS&Co. Terms of Engagement Program. The new requirements are communicated via the Sustainability Guidebook and this RSSP document.

Through this program, good practices will be shared across the supply chain.

### **2.2 Third party audit**

Various third party audits will be used in several ways in this program:

- To determine shortcomings in the company management system and its programs for revision, and to improve integration of best practices into the company management system to verify that:
  - Appropriate occupational safety and health activities are in place
  - Training of the staff/workers is satisfactory
  - The records reflect the necessary data
  - The purchasing operations are in conformity with the SOP
  - Sampling and relevant analysis is done properly
- To verify that priority substances use is decreasing
- To validate that elimination has occurred
- To verify that the elimination of priority substances has commenced and is continuing through use of chemicals and raw materials that comply with the Limit Values as shown in the Appendix 1 LS&Co. Manufacturing Restricted Substance List

Through this program, good practices will be shared across the supply chain.

### **2.3 Transparency**

Options for transparency for this program are still being reviewed as of July 2014 when this document is published and will be addressed in subsequent updates to the RSSP.

### **3. HOW TO USE THIS DOCUMENT**

#### **3.1 Understand and commit**

The body of this document provides context and describes the scope of the RSSP. The leadership teams of LS&Co. business partners should carefully read and understand sections 1 – 4, as each supplier must sign a commitment (set out in Appendix 3) to implement all aspects of the RSSP when the LS&Co. business contact makes the request.

#### **3.2 Implement management system elements**

Section 4 and Appendix 2 provide tools (including forms) for establishing the chemical management system which LS&Co. requires to be in place in each factory of each LS&Co. vendor. Effective implementation of Section 4 and Appendix 2 requires a resource commitment.

The categories of priority substances which are at the heart of the LS&Co. MRSL are identified in Appendix 1, along with restrictions on substances falling within these categories.

#### **3.3 Cross reference other LS&Co. programs**

The current RSSP/MRSL complements other LS&Co. corporate programs such as the LS&Co. Term of Engagement program, the LS&Co. Global Effluent Requirements program and the LS&Co. RSL. References to these programs can be found in the reference section of this document.

## 4 MANUFACTURING RESTRICTED SUBSTANCES LIST (MRSL)

This section presents the management procedures regarding application of the MRSL which can be found in Appendix 1.

### 4.1 Scope

The following production processes are targeted by the MRSL.

1. Mills/Dyehouses
2. Printers
3. Cut/Sew
4. Finishing (Laundries)
5. Accessories
6. Miscellaneous Sundries (metal/non-metal)

### 4.2 Vendor Roles and Responsibilities

We here underscore the importance of our business partners taking the following actions:

1. Commit and endeavor by 1 January 2020, at the latest, to eliminate use of priority substances in the workplace and the discharge of priority substances from facilities into the air, the land, and the water, with an initial focus on eliminating the LS&Co. MRSL listed priority chemical categories. It is the supplier's responsibility to identify the priority substances which are present in the supplier's factories and to seek to eliminate their discharge by 2020;
2. Provide a safe and healthful workplace for employees, in compliance with all applicable regulations and LS&Co. policy positions (e.g., global ban on abrasive blasting and aggressive phase out of fluorinated chemicals) in the factory;
3. Implement an integrated chemical management system in each supplier facility, with emphasis on the following elements:
  - a facility-assigned Technical Representative and necessary resources to implement an integrated chemical management system with the goal of eliminating discharge of priority substances by 2020;
  - use of responsible chemical and raw material suppliers and good working relationships that foster proper transport, handling, and waste management and which provide comprehensive and up-to-date documentation (e.g., Safety Data Sheets, Technical Data Sheets, etc.), and recommendations for training and facilitation of employee awareness;
  - a communication system which provides essential hazards information to employees regarding the chemicals which they use in the workplace;
  - workplace chemical exposure management through the use of feasible engineering and work practice controls, and proper use of appropriate personal protective equipment where necessary;
  - transparency regarding priority substance inventory and chemical suppliers;
  - use of certified chemical management control systems (e.g., Global Organic Textile Standard (GOTS), the bluesign® system, the greenscreen® system, and the Oeko-Tex® standards) ... etc.;
  - work with chemical suppliers and LS&Co. to identify and use feasible substitutes for priority substances; take steps toward making the production process sustainable by, for example, reducing water usage and implementing best available technique;



- evaluate and seek to improve incoming water and materials, and seek to eliminate use and discharge of priority substances within and from the facility.

Responsible production is a team effort, which extends across the entire supply chain. We look forward to working collaboratively at many levels with our suppliers to achieve the 2020 priority substance elimination goal.

### **4.3 Implementation**

LS&Co. has prepared facility integrated management system guidelines and tools to help factories implement necessary controls. These documents can be found in Appendix 2 and Appendix 4.

# 5 APPENDICES

## Appendix 1: LS&Co Manufacturing Restricted Substances List

Implementation plan for MRSL:

Applicable for Mills, Dye House, Printer, Cut/Sew, Finishing/Laundry, Accessories and Miscellaneous.

- 1) Collect declarations (specified in Appendix 3) from chemical suppliers.

In case declaration is not available, or all of them are free from below MRSL listed substances:

- 2) Test waste water as indicated
- 3) Test sludge as indicated
- 4) Test Industrial Hygiene as indicated

LS&Co. is seeking partners to achieve a broader impact on elimination of priority substances from raw materials and chemical products. This can be through harmonization of different MRSL's or working with industry groups like the Zero Discharge of Hazardous Chemicals (ZDHC) group.

Group of chemicals	Substance	CAS#	Limit value (mg/kg)	Criteria	Guidelines to vendor	Vendor monitoring		
						General	Waste Water	Sludge
Phthalates (ortho-phthalates)	Di(2-ethylhexyl) phthalate (DEHP)	117-81-7	sum of all phthalates 250	No intentional use  LS&Co. imposes a policy of Usage Ban for all esters of ortho-phthalic acid	Get declaration from chemical suppliers  Conform to LS&Co. RSL policy (incl packaging)  LS&Co.'s strategy is to use vendors who are committed to PVC free production	On site RSSP assessment by LS&Co. assessor  Compliance control through LS&Co. RSL testing  Perform on-site Industrial Hygiene assessment	US EPA 8270D	US EPA 8270D
	Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8						
	Di-n-octyl phthalate (DNOP)	117-84-0						
	Di-iso-decyl phthalate (DIDP)	26761-40-0						
		68515-49-1						
	Di-isononyl phthalate (DINP)	28553-12-0						
		68515-48-0						
	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl phthalate esters (DHNUP)	68515-42-4						
	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl phthalate esters, C7-rich (DIHP)	71888-89-6						
	Di-n-hexyl phthalate (DnHP)	84-75-3						
	Dibutyl phthalate (DBP)	84-74-2						
	Diisobutyl phthalate (DIBP)	84-69-5						
	Butyl benzyl phthalate (BBP)	85-68-7						
	Dinonyl phthalate (DNP)	84-76-4						
	Diethyl phthalate (DEP)	84-66-2						
	Di-n-propyl phthalate (DPRP)	131-16-8						
	Di-cyclohexyl phthalate (DCHP)	84-61-7						
	Di-iso-octyl phthalate (DIOP)	27554-26-3						
Flame retardants	Tris(2-chloroethyl)phosphate (TCEP)	115-96-8	250	No intentional use  Flame Retardants are not allowed on LS&Co. products	Get declaration from raw material and chemical suppliers  LS&Co. does not allow using flame retardants on its products and has strategy to work with vendors committed to flame retardant free production	On site RSSP assessment by LS&Co. assessor  Compliance control through LS&Co. RSL testing	U.S. EPA Methods 8270D and 8321B	U.S. EPA Methods 8270D and 8321B
	Decabromodiphenyl ether (DecaBDE)	1163-19-5						
	Tris-(2,3,-dibromopropyl)-phosphate (TRIS)	126-72-7						
	Pentabromodiphenyl ether (PentaBDE)	32534-81-9						
	Octabromodiphenyl ether (OctaBDE)	32536-52-0						
	Bis (2,3-dibromopropyl)phosphate (BIS)	5412-25-9						
	Tris(1-aziridinyl)phosphine oxide (TEPA)	545-55-1						
	Polybromobiphenyls (PBB)	Various						
	Tetrabromobisphenol A (TBBPA)	79-94-7						
	Hexabromocyclododecane (HBCDD) and isomer mixtures (α,β,γ)	multiple						
	2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0						
	Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	250					
Restricted Amines from Azo colorants	4,4'-methylene-bis-(2-chloro-aniline)	101-14-4	200	Dyes: No intentional use  Pigments: limit values will be revised based on further study	Do not procure  Dye: Obtain declarations from chemical suppliers  Pigment: Obtain declaration from chemical supplier about cleavable amines	On site RSSP assessment by LS&Co. assessor  Compliance control through LS&Co. RSL testing	US EPA 8270D	US EPA 8270D
	4,4'-methylenedianiline	101-77-9						
	4,4'-oxydianiline	101-80-4						
	4-chloroaniline	106-47-8						
	3,3'-dimethoxybenzidine	119-90-4						
	3,3'-dimethylbenzidine	119-93-7						
	6-methoxy-m-toluidine	120-71-8						
	2,4,5-trimethylaniline	137-17-7						
	4,4'-thiodianiline	139-65-1						
	4-aminoazobenzene	60-09-3						
	4-methoxy-m-phenylenediamine	615-05-4						
	4,4'-methylenedi-o-toluidine	838-88-0						
	2,6-Xylidine	87-62-7						
	o-anisidine	90-04-0						
	2-naphthylamine	91-59-8						
	3,3'-dichlorobenzidine	91-94-1						
	4-Aminodiphenyl	92-67-1						
	Benzidine	92-87-5						
	o-toluidine	95-53-4						
	2,4-Xylidine	95-68-1						

	4-chloro-o-toluidine	95-69-2						
	4-methyl-m-phenylenediamine	95-80-7						
	o-aminoazotoluene	97-56-3						
	5-nitro-o-toluidine	99-55-8						
	Component 1: C39H23ClCrN7O12S-2Na Component 2: C46H30CrN10O20S2-3Na	118685-33-9 not allocated						
Dyes – Navy Blue Colourant			250	No intentional use	Do not procure  Obtain declaration of non-use from chemical suppliers	On site RSSP assessment by LS&Co. assessor  Compliance control through LS&Co. RSL testing	U.S. EPA Method 8321B	U.S. EPA Method 8321B or ISO 16373-2 modified
Dyes – Carcinogenic or Equivalent Concern	C.I. Direct Black 38	1937-37-7	250	No intentional use	Do not procure  Obtain declaration of non-use from chemical suppliers	On site RSSP assessment by LS&Co. assessor  Compliance control through LS&Co. RSL testing	U.S. EPA Method 8321B	U.S. EPA Method 8321B or ISO 16373-2 modified
	C.I. Direct Blue 6	2602-46-2						
	C.I. Acid Red 26	3761-53-3						
	C.I. Basic Red 9	569-61-9						
	C.I. Direct Red 28	573-58-0						
	C.I. Basic Violet 14	632-99-5						
	C.I. Disperse Blue 1	2475-45-8						
	C.I. Disperse Blue 3	2475-46-9						
	C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5						
	C.I. Basic Green 4 (Malachite Green Chloride)	569-64-2						
	C.I. Basic Green 4 (malachite green oxalate)	2437-29-8						
	C.I. Basic Green 4 (malachite green)	10309-95-2						
Dyes – Disperse (Sensitizing)	Disperse Orange 11	82-28-0	250	No intentional use	Do not procure  Obtain declarations from chemical suppliers	On site RSSP assessment by LS&Co. assessor  Compliance control through LS&Co. RSL testing	U.S. EPA Method 8321B	U.S. EPA Method 8321B or ISO 16373-2 modified
	Disperse Yellow 1	119-15-3						
	Disperse Blue 102	12222-97-8						
	Disperse Blue 106	12223-01-7						
	Disperse Yellow 39	12236-29-2						
	Disperse Orange 37/59/76	13301-61-6						
	Disperse Brown 1	23355-64-8						
	Disperse Orange 1	2581-69-3						
	Disperse Yellow 3	2832-40-8						
	Disperse Yellow 9	6373-73-5						
	Disperse Red 11	2872-48-2						
	Disperse Red 1	2872-52-8						
	Disperse Red 17	3179-89-3						
	Disperse Blue 7	3179-90-6						
	Disperse Blue 26	3860-63-7						
	Disperse Yellow 49	54824-37-2						
	Disperse Blue 35 (mixture of monomethylated and dimethylated 1, 8 diamino 4,5 – dihydroxy anthraquinone and 1,5-diamino-4,8-dihydroxy-2-[4-hydroxyphenyl] anthracene-9,10-dione)	56524-77-7 56524-76-6 12222-75-2						
	Disperse Blue 124	61951-51-7						
	Disperse Orange 3	730-40-5						
	Organotin Compounds	Mono- & Tributyltin derivatives						
Dibutyltin (DBT)		various	20					
Mono-, Di- & Trimethyltin derivatives		various	5					
Mono-, Di- & Triphenyltin derivatives		various						
Tricyclohexyltin (TCyHT)		various						
Mono-, Di- & Trioctyltin derivatives		various						
Chlorobenzenes and Chlorotoluenes	1,2-dichlorobenzene	95-50-1	1000	No intentional use	Obtain chemical supplier declaration about absence or no release of any of the compounds. If present, specify levels and inform LS&Co.  Vendor shall investigate whether there are any solvent emissions related to these compounds	On site RSSP assessment by LS&Co. assessor  Compliance control through LS&Co. RSL testing  Perform on-site Industrial Hygiene assessment	U.S. EPA Method 8270D	U.S. EPA Method 8270D
	Mono-, di-, tri-, tetra-, penta- and hexa-chlorobenzenes	various	Sum of 200 (except 1,2-dichloro benzene)					
	Mono-, di-, tri-, and tetra-, penta-, chlorotoluenes	various						
Glycols	Bis(2-methoxyethyl)-ether	111-96-6	50	No intentional use	Obtain chemical supplier declaration about absence or no release of any of the solvents. If present, specify levels and inform LS&Co.  Vendor shall investigate whether there are any solvent emissions related to these solvents	On site RSSP assessment by LS&Co. assessor  Compliance control through LS&Co. RSL testing  Perform on-site Industrial Hygiene assessment	U.S. EPA 8015D	U.S. EPA 8015D
	2-ethoxyethanol	110-80-5						
	2-ethoxyethyl acetate	111-15-9						
	Ethylene glycol dimethyl ether	110-71-4						
	2-methoxyethanol	109-86-4						
	2-methoxyethylacetate	110-49-6						
	2-methoxypropylacetate	70657-70-4						
	Triethylene glycol dimethyl ether	112-49-2						
Halogenated Solvents	1,2-dichloroethane	107-06-2	5	No intentional use	Obtain chemical supplier declaration about absence or no release of any	On site RSSP assessment by LS&Co. assessor  Compliance control	U.S.EPA 8260C	U.S. EPA 8260C analysis
	Methylene chloride	75-09-2	5					
	Trichloroethylene	79-01-6	40					
	Tetrachloroethylene	127-18-4	5					

					of the solvents. If present, specify levels and inform LS&Co.  Vendor shall investigate whether there are any solvent emissions related to these solvents	through LS&Co. RSL testing  Perform on-site Industrial Hygiene assessment		
Volatile Organic Compounds (VOC)	Benzene	71-43-2	50	No intentional use	Obtain chemical supplier declaration about absence or no release of any of the solvents. If present, specify levels and inform LS&Co.  Vendor shall investigate whether there are any solvent emissions related to these solvents	On site RSSP assessment by LS&Co. assessor	EPA 8260C	EPA 8260C
	Xylene	1330-20-7	500					
Other Organic Compounds	o-cresol	95-48-7	500	No intentional use	Obtain chemical supplier declaration about absence or no release of any of the solvents. If present, specify levels and inform LS&Co.  Vendor shall investigate whether there are any solvent emissions related to these solvents	Compliance control through LS&Co. RSL testing  Perform on-site Industrial Hygiene assessment	US EPA 8270D	US EPA 8270D
	p-cresol	106-44-5						
	m-cresol	108-39-4						
Chlorophenols	Tetrachlorophenols (TeCP)	25167-83-3	sum of 20	No intentional use	Obtain chemical supplier declaration about absence or no release of any of the preservatives. If present, specify levels and inform LS&Co.	On site RSSP assessment by LS&Co. assessor.  Compliance control through LS&Co. RSL testing  Perform on-site Industrial Hygiene assessment	US EPA 8270D	US EPA 8270D
	Pentachlorophenol (PCP)	87-86-5	20					
	4-chloro-3-methylphenol (p-chlorocresol)	59-50-7	50					
	Mono-, di-, and tri-chlorophenols	various						
Short-Chain Chlorinated Paraffins (SCCPs)	Short Chain Chlorinated Paraffins (SCCP) (C10-C13)	85535-84-8	50	No intentional use  Limit values will be revised based on further study	Obtain declaration from chemical supplier and check incoming water	On site RSSP assessment by LS&Co. assessor  Perform on-site Industrial Hygiene assessment	ISO 12010	ISO 12010 modified and EPA 3540C
Polycyclic Aromatic Hydrocarbons (PAHs)	Benzo[a]pyrene (BaP)	50-32-8	20	No intentional use	Ensure products and processes are free from PAH use  Obtain declarations from chemical suppliers	On site RSSP assessment by LS&Co. assessor  Compliance control through LS&Co. RSL testing	EPA Method 8270D	EPA Method 8270D
	Cyclopenta[c,d]pyrene	27208-37-3						
	Dibenzo[a,e]pyrene	192-65-4						
	Dibenzo[a,h]pyrene	189-64-0						
	Dibenzo[a,i]pyrene	189-55-9						
	Dibenzo[a,l]pyrene	191-30-0						
	1-Methyl pyrene	2381-21-7						
	Benzo[e]pyrene	192-97-2						
	Benzo[j]fluoranthene	205-82-3						
	Benzo[b]fluoranthene	205-99-2						
	Benzo[k]fluoranthene	207-08-9						
	Chrysene	218-01-9						
	Dibenz[a,h]anthracene	53-70-3						
	Benzo[a]anthracene	56-55-3						
	Anthracene	120-12-7						
	Pyrene	129-00-0						
	Benzo[ghi]perylene	191-24-2						
	Indeno[1,2,3-cd]pyrene	193-39-5						
	Fluoranthene	206-44-0						
	Acenaphthylene	208-96-8						
	Acenaphthene	83-32-9						
	Phenanthrene	85-01-8						
	Fluorene	86-73-7						
	Naphthalene	91-20-3						
Total Heavy Metals	Residual traces of antimony,Zinc,Copper,Nickel,Tin,Barium,Cobalt,Iron,Manganese,Selenium and Silver in colourants are expected to comply with ETAD concentration limits (www.etad.com)							
	Arsenic (As)	7440-38-2	50	No intentional use  Conformance to LS&Co. policies ( RSL, GER) and local effluent and sludge disposal guidelines	Assess through declarations on raw materials and components. Control processes to meet output criteria defined by LS&Co. policy. Use only dyes and auxiliaries which provide Technical Data Sheets and other relevant documents that give guidance for use in processes.	On site RSSP assessment by LS&Co. assessor  Compliance control through LS&Co. RSL testing	EPA method 6010C for As, Cd, and Pb ; EPA method 7470/7471 for Hg; EPA 7199 for Cr (VI)	EPA method 6010C for As, Cd, and Pb and EPA method 7470/7471 for Hg and EPA Method 3060A+EPA 7199 for Cr(VI)
	Cadmium (Cd)	7440-43-9	20 / 50 for pigments					
	Chromium VI (Cr VI)	18540-29-9	10					
	Lead (Pb)	7439-92-1	100					
	Mercury (Hg)	7439-97-6	4 / 25 for pigments					
Alkylphenol (AP)	Nonylphenol (NP)	various	5	No intentional	Obtain	On site RSSP	DIN EN ISO	DIN EN ISO

and Alkylphenol Ethoxylates (APEOs): including all isomers	(n-Nonylphenol mixed isomers)			use	declaration from chemical supplier and check incoming water	assessment by LS&Co. assessor  Compliance control through LS&Co. RSL testing	18857-2 or ASTM D7065	18857-2 modified, or ASTM D7065 modified
	Octylphenol (OP) (Octylphenol mixed isomers)	various	5					
	Octylphenol ethoxylates (OPEO) (EO=1-20)	various	250					
	Nonylphenols ethoxylates (NPEO) (EO=1-20)	various	250					
Perfluorinated and Polyfluorinated Chemicals (PFCs)	Perfluorooctane sulphate (PFOS)	2795-39-3	50 µg/kg	No intentional use  Beginning January 1, 2015: Durable water, oil and stain repellent finishes and soil release finishes (fluorinated polymers) based on long-chain technology are banned for LS&Co. products.	Ensure compliance with LS&Co policy. Aggressively phase out use of PFCs, and ensure worker protection at all times is in compliance with applicable limits. and urge other customers likewise to phase out PFCs. LS&Co. does not allow to use PFCs on its products and has strategy to work with vendors committed to PFCs free production.	On site RSSP assessment by LS&Co. assessor  Compliance control through LS&Co. RSL testing	ISO 25101	CEN/TS 15968modified
	Perfluorooctanoic acid (PFOA)	335-67-1	50 µg/kg					
		678-39-7	1					

## Appendix 2: Facility Integrated Management System

Operational procedures development is the responsibility of the facility as mentioned previously. LS&Co. has established minimum requirements for operational procedures, and in this guidebook provides tools and checklists to assist facilities with implementation. For details, please review the Appendices.

These operational procedures complement guidance in the LS&Co. Sustainability Guidebook which also provides best management practices for many of the areas covered below. In particular, the following sections are relevant: Industrial Hygiene; Chemical Management, Waste Management, Preventing Storm Water Pollution; and the Global Effluent Requirements and the Environmental Guidelines.

### 2.1 Management Commitment

#### ***Purpose***

Factory management shall commit to and develop a management system approach which seeks to achieve the goal of eliminating discharge of priority substances by 2020, and which provides for a Technical Representative with adequate resources and authority.

#### ***Capabilities***

Factory's management system approach must be supported by establishing the following in a stepwise fashion:

- Assign a Technical Representative dedicated, where practicable as his or her only task, to developing the facility's chemical management system and implementing the RSSP
  - Requires a professional with an educational background demonstrating competence to work in chemistry or textile processing
  - Requires ability to establish programs and to collect, analyze and communicate substance-related data effectively
  - Requires ability to carry out meaningful and systematic record-keeping
  - Requires good interpersonal skills to provide training on all levels, monitor program performance, update Factory Management, engage stakeholders including chemical suppliers, and initiate annual (or other periodic) program reviews.
- Make available sufficient resources for the Technical Representative to establish the chemical safety management system and implement the RSSP
- Be committed to insist that chemical suppliers provide safe chemicals
- Be committed to change technology or techniques if it is the only way to eliminate certain priority substance use
- Be committed to stop use of technology or techniques if it is the only way to eliminate certain type of priority substance use
- Be committed to public disclosure of site level chemical-related data (substance list, volumes, chemical characteristics, etc.)

#### ***Specific requirements***

Carefully review the Levi Strauss & Co. Supplier Restricted Substance Stewardship Program Compliance Agreement, sign and return to your LS&Co. Sourcing and Supplier Management contact (Appendix 3).

## ***Sustainability Requirements***

Factory shall retain on site and provide to LS&Co. a signed Management Commitment Form and a signed Compliance Agreement (See

Appendix 3). Factory shall have on site a suitably qualified Technical Representative capable of implementing the LS&Co. Restricted Substances Stewardship Program.

## **2.2 Technical Representative**

### ***Purpose***

The Technical Representative's core deliverable is to demonstrate by relevant data and metrics that the facility's priority substances are responsibly managed, and that priority substances usage and discharge are continually decreasing. In addition, the Technical Representative is responsible and authorized for implementing the chemical management system for the vendor's location (the factory).

### ***Scope of Responsibilities***

The Technical Representative shall manage all aspects of chemical usage in the factory, including but not limited to the following:

- Collection and analysis of data
- Chemical risk management
- Record-keeping
- Communication with broad stakeholders and especially work with chemical/auxiliary and raw material suppliers, laboratories and various third parties to continually reduce hazards
- Management of chemical-specific feedback and/or complaints from workers and neighbors
- Effective engagement and/or supervision of personnel involved with purchasing, inventory management, substance-related waste reduction and waste management due diligence
- Monitoring of environmental media air, water and sludge as appropriate
- On-going updates to factory management and brand stakeholder update on progress, review and implementation of corrective actions
- Planning and follow-up of internal and third party audits of the system

### ***Specific requirements***

- Ensure that all substance-related activities are centralized through the Technical Representative
- Establish an approved chemical supplier list and an approved chemicals list and ensure that all chemical purchases are made only from these lists
- Communication of LS&Co.'s Manufacturing Restricted Substances List (MRSL) and Restricted Substances List (RSL) with all raw material and chemical/auxiliary suppliers
- Ensure receipt of high quality and latest version of Safety Data Sheets (SDS), formerly known as MSDSs, from chemical suppliers
- Collect all other necessary chemical related documents such as Technical Data Sheets (TDS), Recipes, Chemical Information Log sheets (CIL), Priority Substance Disclosure forms (PSD), Compliance Agreements, Analysis Certificates, and Analysis reports from relevant personnel, and establish an efficient archiving system for documents
- Analyze SDS/MSDS of all facility chemicals, focusing on occupational health and safety and environmental protection and taking necessary actions (e.g. create Workplace Hazardous

Chemicals Map (Appendix 4, Form 7) for the factory, as referenced below; establish Personal Protective Equipment protocol (PPE), etc.) based on information from SDS/MSDS

- Create Priority Substances Log tracking sheet (Appendix 4, Form 4) and work on reduction, substitution and elimination of each priority substances
- Prepare sampling programs for supplied chemicals, water, effluents and perform sampling for chemical analysis
- Prepare and issue regular reports regarding priority substances evaluation and elimination
- Approve the purchase of any new chemical or raw material before implementation in bulk (e.g. samples)
- Provide training for all stakeholders regarding the chemical management system e.g. purchasing department, maintenance department, production, warehousing, waste personnel, etc.
- Train workers regarding risks from hazardous chemicals, and safe usage techniques
- Approve use of chemicals used by contractors in conducting temporary work on-site
- Provide support to purchasing personnel regarding acquisition of chemicals and raw materials
- Verify that chemical inventories contain the recommended minimum information (Appendix 4, Form 4) and that they are always up-to-date
- Collect the following documents: SDS/MSDS, PSD, TDS if applicable, Analysis Certificates.
- Collect the following document for LS&Co. production only: the LS&Co. CIL
- Create a phase out Priority Substance Log tracking sheet (Appendix 4, Form 5) and continually consult with factory management/chemical suppliers/vendors regarding the phase out roadmap; demonstrate reduction of priority substances through transparent communication
- Establish factory sampling programs for testing releases into all media – air, water and sludge

### ***Sustainability Requirements***

**Factory shall appoint a Technical Representative whose job description includes the specifics listed above.**

**Factory shall be able upon request to make available a description of the design and underlying documentation of the facility chemical management system as established by Technical Representative and approved by the factory's General Manager, with a full copy being available for electronic transmission upon request.**

**The documentation shall include an up-to-date chemical inventory of all chemicals present in factory (production, on-site laboratory, maintenance, sanitary, waste water treatment plant, and using in the pest management).**

**Technical Representative shall be able to demonstrate that brand specific requirements (Restricted Substances Lists (RSL), Manufacturing Restricted Substances List (MRSL), Chemical Information Log (CIL), Priority Substance Disclosure (PSD) form) have been completed by chemical suppliers prior to purchase.**

**Technical Representative shall be able to demonstrate that all chemicals being brought on site are accompanied by relevant documentation (Safety Data Sheet (SDS), Technical Data Sheet, etc.).**

**Factory shall be able to demonstrate that all chemicals brought on site have been reviewed and approved (including development trial chemicals) by the Technical Representative before the first shipment to the factory is made.**



Technical Representative shall be able to demonstrate that all chemicals are ordered through a centralized purchasing department and that chemical acquisition decisions have been made with the Technical Representative's consent.

Technical Representative shall prepare a facility floor plan (Workplace Hazardous Chemicals Map) which identifies hazardous chemical risks for each floor and each area.

Factory shall prepare a Priority Substances Log tracking sheet which for each priority substance concisely summarizes planned work on reduced usage, eventual phase out and substitution, and related communications with chemical suppliers.

Factory in allocating available resources shall implement best available technology or techniques where feasible.

Technical Representative shall communicate appropriate chemical management to temporary, on-site contractors.

Factory shall issue, periodically update, and make available upon request a report regarding the factory's progress toward achieving the goal of eliminating the priority substances use by 2020.

Technical Representative shall provide safety training to all factory employees whose tasks include the handling and use of chemicals on site.

All factory employees shall demonstrate knowledge and understanding regarding the RSSP chemical management system program as it relates to their job responsibilities and area of work in the factory.

Technical Representative shall work closely with third parties identified by LS&Co. to quantify and coordinate the monitoring of releases to air, water and sludge for human and environmental protection, and to demonstrate progress toward the goal of elimination of priority substances discharge.

Factory shall periodically issue publicly available periodic reports regarding the nature and quantity of releases, and demonstrate progress towards the goal of elimination of priority substances discharge.

## 2.3 Purchasing Practices

### ***Purpose***

Purchasing practice must be in line with the factory's chemical management system as established by the Technical Representative and approved by the factory manager. Purchasing practices play a key role in achieving a factory's commitment to decreasing priority substances use and achieving the goal of no discharge of priority substances.

### ***Capabilities***

The purchasing manager shall manage all purchases of chemicals and raw materials including those used in:

- Production
- Maintenance
- Sanitary and cleaning
- Waste water treatment
- On-site laboratories
- Miscellaneous activities such as pest management, outsourced activities

### ***Specific requirements***

Every purchase order shall implement at least the following factory stewardship requirements:

- Include the information in (Appendix 4, Form 3 )
- Select chemical suppliers only from an "Approved Chemical Suppliers List" and raw materials suppliers only from the "Approved Raw Materials Suppliers List" created by the factory's Technical Representative
- Select chemicals only from an "Approved Chemicals List" and raw materials only from the "Approved Raw Materials List" created by the factory's Technical Representative
- When potential new chemicals, potential new raw materials, new chemical suppliers or new raw material suppliers are being considered, the purchasing manager shall inform the Technical Representative as soon as possible, and only order chemical and/or the raw material from the proposed chemical supplier or raw material supplier once Technical Representative approves it/them
- The purchasing manager for chemicals coming onto the factory site must obtain from the chemical supplier and provide to the Technical Representative a Safety Data Sheet (SDS/MSDS) and other technical documentation regarding each chemical that is shipped to the factory site. (e.g. Analysis reports from chemical suppliers)

### ***Sustainability Requirements***

All factory chemical and raw material purchases shall be made only through the purchasing department and in consultation with and with approval by the Technical Representative.

Factory purchasing practices shall be aligned with the chemical management system as established by the Technical Representative.

Factory shall be able to demonstrate that the required documents and required messages are included in each purchase order.

Purchasing staff shall be able to demonstrate that all chemicals and raw materials are ordered only from chemical and raw material supplier lists which have been approved by the Technical Representative.

## 2.4 Priority Substance Tracking Sheet

### ***Purpose***

To make meaningful progress toward the goal of achieving zero discharge of priority substances, it is vital for each factory to have a rigorous chemical management system in place, a key element of which is tracking of hazards alongside the normal chemical inventory.

### ***Capabilities***

The Technical Representative shall prepare a hazard tracking sheet for chemicals listed on the factory's chemical inventory, to ensure that priority substances and the quantities (concentration) in the chemicals are immediately visible. For each chemical used in the factory, the following information must be set forth on the hazard tracking sheet:

- Each chemical present in the facility, area (s) where it is found, and details regarding their usage in the manufacturing process
- Data regarding any restricted substances that may be present in a chemical which is present in the facility, as identified by the LS&Co priority categories and any additions to the focus list that are later made
- Identify any other hazard data of potential adverse health and environmental impacts related to the manufacturing processes and chemicals present in the facility

### ***Specific requirements***

- The Technical Representative has to communicate efficiently with chemical suppliers to map out all priority substances in each chemical used in the factory
- The Priority Substance Tracking Sheet shall be a publicly available document as described in Section 2.8
- Every chemical present on the factory premises, and every newly purchased chemical shall be listed in the Priority Substance Tracking Sheet (Appendix 4, Form 4) by the Technical Representative without delay with all fields completed
- Use of newly purchased chemicals cannot occur before hazard and risk assessment is completed by Technical Representative
- If the risk assessment indicates that additional measures must be taken, all necessary technical and technological modifications shall be made before first use of a new chemical
- If risk assessment indicates that personal protective equipment (PPE) is needed, PPE shall be distributed and workers trained before first use of a new chemical
- Proper training shall be given to relevant employees on how to handle, use, and dispose of the new chemical to reduce exposure, and protect the environment
- The Technical Representative is responsible for including all new chemicals in the factory's Workplace Hazardous Chemicals Map – see Appendix 4, Form 7
- The Technical Representative is responsible for establishing a phase out plan for priority substances identified on the MRSL list

## ***Sustainability Requirements***

Factory shall create and manage a Priority Substances Tracking Sheet for all chemicals on a substance composition basis.

Factory shall include in the approved chemicals inventory all data as required by LS&Co. as identified in Appendix 4, Form 4.

Factory shall be able to reference a risk assessment for every chemical listed in the approved chemicals inventory.

Factory shall be able to demonstrate that for chemicals used in the factory recommended actions regarding human exposure and environmental protection have been taken for to achieve safe use of all chemicals.

Factory shall be able to demonstrate that significant risks have been properly communicated to relevant employees through the Workplace Hazardous Chemicals Map and periodic training.

Factory shall be able to demonstrate that all identified priority substances are linked from the approved chemicals and approved raw material lists to the Priority Substances Tracking Sheet, and that for each such priority substance a phase out plan has been prepared.

Factory shall compile a list of laboratories where all incoming chemicals and raw materials can be tested for priority substances identification.

Factory shall maintain a list of laboratories where water air emissions and/or sludge can be tested for priority substance content identification.

## 2.5 Priority Substances Log

### ***Purpose***

To facilitate the goal of achieving zero discharge of priority chemicals, it is important to have a list of substances which is monitored continuously and for which the listed substances are prioritized for elimination. A plan must be prepared for each of the priority substances with the goal of substituting with neutral substances at the earliest feasible date.

### ***Capabilities***

Facility shall maintain a priority substances inventory and indicate on a map all priority substances present in the facility:

- The Technical Representative shall forward the LS&Co. RSL and RSSP to all chemical suppliers, request compliance and report to LS&Co. those suppliers which refuse to comply.
- The Technical Representative shall communicate with chemical suppliers to identify all priority substances in each chemical product used in the factory.
- The Priority Substances Log shall be a publicly available document as described in Section 2.8
- The factory shall establish a phase out plan for each priority substance.
- All priority substances shall be monitored continually according to an appropriately designed program until fully implemented from use.
- A basic example of a Priority Substances Log can be found in Appendix 4, Form 5.

### ***Specific requirements***

The factory shall identify and establish a commercial relationship with qualified testing laboratories as identified by LS&Co. *[tell them where to find this list]* so that priority substance present in the incoming water, used on site and discharged from the site may be accurately measured.

The factory shall establish a commercial relationship with a trustworthy third party organization as identified by LS&Co. through which all priority substance related data can be published. For a minimum requirement of data disclosure, please see Section 2.8

### ***SES Requirements***

**Factory shall manage a Priority Substance Log which includes phase out plan for each priority substance.**

**Factory shall establish commercial relationship with a qualified analytical laboratory so that sample of incoming chemicals, raw materials can be tested to determine whether they contain priority substances.**

**Factory contract commercial laboratories shall also be used to identify chemical constituents discharged into air, wastewater and/or sludge.**

**Factory shall work with a reputable third party organization as identified by LS&Co. which uploads the factory's priority substances related data to a publicly available web site.**

## 2.6 Incoming Raw Materials Log

To facilitate achieving the goal of zero discharge of priority substances by 2020, it is necessary to control all incoming materials and water.

### ***Capabilities***

The Technical Representative shall forward the LS&Co. RSL and RSSP to all raw material suppliers, request compliance and report to LS&Co. those suppliers which refuse to comply.

The Technical Representative shall establish efficient communication channels with all raw material suppliers.

All raw material suppliers must declare to the factory the priority substance content of any raw materials shipped to the factory.

The Technical Representative shall prepare a Priority Material Log tracking sheet for all incoming raw materials with priority substance(s) content.

Each priority substance identified shall be the subject of a phase out program agreed between the LS&Co. vendor and its raw material supplier.

The Priority Material Log tracking sheet for raw materials and their phase out program shall be publicly disclosed and available for review by the general public.

The factory shall develop a random testing procedure for the various raw materials.

A basic example of a Priority Material Log can be found in Appendix 4, Form 6.

### ***SES Requirements***

**The factory shall demonstrate that all LS&Co. requirements (e.g. RSL, MRSL) are shared with all raw material suppliers.**

**The factory shall maintain an approved raw material supplier list, available upon request.**

**The Factory shall maintain an up-to-date Priority Material Log tracking sheet (Appendix 4, Form 5) for all raw materials.**

**The Factory shall develop a phase out program for each priority substance present in raw materials.**

**The factory shall make its Priority Material Log tracking sheet and its phase out plans publicly accessible.**

**The Factory shall make available to LS&Co. the factory testing program and the related test reports regarding raw materials.**

## 2.7 Monitoring of Priority Substances

### *Purpose*

To demonstrate that the factory is continually decreasing the presence of priority substances in factory operations, the factory must commit to periodically measure the priority substances content of its chemicals, raw materials, incoming water and its releases (air, sludge and water) as is feasible. The factory using its management system approach and monitoring, should be able to assess the extent to which priority substances are being eliminated from the operations.

### *Capabilities*

At the current time, due to a lack of standard methods for monitoring certain raw materials and chemicals, supplier declarations are acceptable without confirming via monitoring until scientific consensus is developed regarding a globally acceptable monitoring paradigm.

- For incoming and effluent water, scientific methods exist but availability of capable sampling and analytical services are limited. The water testing methods can be found in Appendix 9 for the analytes of concern, and will be used to design factory water/wastewater monitoring. In areas where services are available, the following steps would be needed to establish monitoring:
  - Determine whether there is access to laboratory services capable of testing the list of analytes in Appendix 1 in influent, process wastewater and treated effluent in an acceptable proximity to the factory to preserve sample integrity.
  - Determine whether there are capabilities for proper sampling and quality assurance to conduct valid monitoring at the factory.

### *Specific Requirements*

The Occupational Air Monitoring program is required by the LS&Co. Terms of Engagement. The program guidelines can be found in the LS&Co. Sustainability Guidebook in the Industrial Hygiene Section.

Establish a monitoring program for water, and effluents, and ensure that data is made publicly available as described in Section 2.8.

The monitoring program of the LS&Co. Global Effluent Requirements established in 1994 will continue to measure treated effluents from laundry operations.

### *Sustainability Requirements*

**The factory shall implement the Industrial Hygiene Section of the LS&Co. Sustainability Guidebook.**

**The factory shall investigate and evaluate the local laboratory capabilities for obtaining valid results from sampling and testing influent, untreated and treated effluent discharges.**

**The factory shall conduct at a qualified analytical laboratory a benchmark**

**analysis of the factory's influent water, untreated and effluent water, which analysis shall be publicly available.**

**The factory shall use the benchmark exercise to establish a factory transparent monitoring program.**

**Factory that discharges directly to the environment shall continue to monitor their treated effluent in accordance with the LS&Co. Global Effluent Requirements program.**

## 2.8 Transparency Requirements

### ***Purpose***

To demonstrate improvement in chemical management, factory commits to make its chemical inventory publicly available, and to disclose information regarding priority substance discharge to the public, following the Right to Know Principle.

### ***Capabilities***

The factory appointed Technical Representative shall ensure a proper tracking system is in place to manage the chemicals inventory, as per the requirements outlined in this document. Technical Representative will create and implement a clear process for making the chemicals inventory publicly available, be it the public, government agencies, clients or other organizations.

Technical Representative is also responsible to build and maintain a relationship with existing local PRTR [spell out] or similar platform for disclosure of priority substance discharge, legally required or voluntary.

### ***Specific Requirements***

Technical Representative shall adopt a suitable and transparent chemical inventory tracking system

Technical Representative shall create a process for making the chemical inventory available to third parties

Technical Representative shall build a relationship with an existing PRTR or similar platform, with the intent of updating priority substance discharge data and making it available at least annually, regardless whether this is legally required

### ***Sustainability Requirements***

**Factory shall make its chemical inventory easily and freely available to whoever may ask.**

**Factory shall meet data and information requirements as legally required, such as**

**annual data input in a PRTR or similar platform.**

**In the absence of such legal framework, and if a PRTR or similar platform is available, factory shall provide data input in said PRTR or similar platform.**



### **Appendix 3: Commitment to Restricted Substances Stewardship for Vendors and their Suppliers (initial hazard level must continually decrease)**

Dear LS&Co. Business Partner:

LS&Co. is committed to operating its business in a responsible manner that provides safeguards to its consumers and workers, and protects the environment. In this regard, you are already familiar with the LS&Co. Restricted Substances List, which centers on consumer protection by imposing restrictions regarding what may be present on our products when they leave your facility. You are also familiar with our Sustainability Guidebook, which lays out our expectations and requirements on the manner in which our products are manufactured and which covers a wide range of issues such as ethical standards, working hours, wages and benefits, discrimination, worker health and safety, and the environment. Consistent with this we would like to engage you on our Restricted Substances Stewardship Program, and its Guidebook.

The occupational health and safety of the workers in your factory, and the impact of your manufacturing process on the environment, are extremely important to us, hence our Terms of Engagement. The RSSP complements, but does not replace, the requirements in our Sustainability Guidebook. Likewise, it complements, but does not replace, our commitment to the Zero Discharge of Hazardous Substances Program's Joint Roadmap, version 2, as announced on June 14, 2013. The RSSP underscores the importance of conducting your manufacturing operations in a manner which is consistent with our ethical standards and our insistence on, for example, worker right to know, the application of the precautionary principle, and adoption of best available technology where feasible. It is important for you to note that, the attached RSSP Guidebook details the supply chain program, but there are many stakeholder dialogues to help you and LS&Co. meet the goal of zero discharge of priority substances by 2020. These stakeholders include chemical manufactures, NGOs, analytical laboratory networks and our team of third party independent experts in the field of textile chemistry.

The RSSP is enclosed for your use, and is effective for all LS&Co. products manufactured after 1<sup>st</sup> January 2015. The Program is applicable to the manufacture of all LS&Co. finished products including, but not limited to, apparel, non-apparel, and footwear, and is likewise applicable to all substances, materials, parts, and other goods and sundries used in the production of LS&Co. goods. An overview of the Program is set out in the Introduction of this document.

As a business partner to LS&Co., you play a vital role in ensuring compliance with the RSSP. Accordingly, we require that you review and return an executed copy of the enclosed Restricted Substances Stewardship Program Compliance Agreement.

Should you have any questions or need further clarification regarding the RSSP, please contact the LS&Co. representative in your region.

Please confirm your receipt of the RSSP by email to \_\_\_\_\_.

Regards,  
Levi Strauss & Co.

## Levi Strauss & Co.

### Agreement for Compliance with LS&Co.'s Restricted Substances Stewardship Program

As LS&Co.'s Supplier, we understand that the Restricted Substances Stewardship Program ("RSSP") is an important feature of LS&Co.'s business and adds significant value to LS&Co.'s brands. Accordingly, Supplier hereby declares and agrees that:

- We have received, read and fully understand LS&Co.'s RSSP, including its prohibitions and limitations as published in July 2014. We understand that the RSSP may be amended from time to time, hereafter.
- LS&Co. regularly updates the RSSP and we, as a LS&Co. Supplier, will use best efforts to keep informed of these updates as they occur;
- We are aware that LS&Co. has also issued, and regularly updates, a Restricted Substances List ("RSL"), which is intended to ensure compliance with the legal and consumer protection standards applicable to all finished products sold under a LS&Co. brand label or distributed by LS&Co. We understand that, by comparison, the RSSP is intended to ensure full transparency on any use of priority chemicals by Sources and Suppliers in their manufacturing processes. Thus if a Source or Supplier provides even one percent (1%) of its output for use in an LS&Co.-labeled or LS&Co.-distributed product, the RSSP obligates that Source or Supplier to advise LS&Co. of any and all uses of priority chemicals anywhere in its processes, even if those uses are devoted exclusively to raw materials, chemicals, component parts and other goods, supplied to entities that have no direct or indirect connection to any supply chain for LS&Co.
- We commit to the goal of eliminating by 2020 the discharge of priority chemicals from any of our facilities into the air, the land, surface water and groundwater. Our initial focus will be on substances falling within the following LS&Co. MRSL listed categories as further identified in Appendix 1 of the RSSP.
- We will assign a qualified full-time employee to be a RSSP Technical Representative, who, where practicable, will work full time on RSSP implementation. We will also commit all necessary resources to implement an integrated chemical management system, with the goal of eliminating discharge of priority chemicals by 2020.
- We will employ all applicable industry best practices in our chemical exposure management through the use of feasible engineering and work practice controls, and the use of appropriate and proper personal protective equipment where necessary.
- We commit to complete transparency regarding our chemical inventory and discharge data.
- We will regularly evaluate, and seek to improve the quality of process intake water and materials.
- We will submit a properly executed, complete and binding copy of this Agreement to the relevant LS&Co. Sourcing and Supplier Management Staff and to each of our LS&Co. Source(s).
- We understand and agree that LS&Co. reserves the right, but not the obligation, to request testing, by any method, of any ordered chemical, compound, substance and other goods, at any time or stage of our production, as well as the air, soil, surface water, groundwater, wastewater or wastewater treatment sludge associated with each of our manufacturing facilities.
- We understand that any failure to comply with the MRSL is a material breach of each agreement we have with LS&Co.
- We defend and hold, and will continue to defend and hold, LS&Co. as well as LS&Co. Sources and all other entities and individuals in the LS&Co. supply and distribution chains, as well as their respective agents and employees harmless against, any and all claims, losses, liabilities, expenses and damages, caused by our failure to comply with any provision of the RSSP.

The undersigned is an owner, director, officer or managing agent, authorized to agree to and sign this Compliance Agreement on behalf of the company identified below.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Position: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Email address: \_\_\_\_\_

Date: \_\_\_\_\_

**Please sign this agreement and return it to your LS&Co business contact by:**

## **Appendix 4: Forms and Letters**

### **Form 1: Letter Requesting Priority Substances Disclosure from Chemical Suppliers**

Chemical Supplier

Dear Sir/ Madam

We are committed to eliminating the LS&Co. MRSL listed priority chemical groups of priority substances from our processes. These substances may be present in the chemicals you supply us, and we ask you to complete the attached Priority Substance Disclosure Form to inform us about them.

Without a completed and signed Priority Substances Disclosure Form, we are unable to clear your chemical(s) for purchase.

Please complete truthfully to the best of your knowledge, and return this form to our Purchasing Manager at.... by...

Thank you.

Yours faithfully,

## Form 2: Priority Substances Disclosure Form

The purpose of this document is to gather information on priority substances present in any concentration identified in **ALL** (laboratory, maintenance, sanitary, waste water treatment or production, pest management) chemical preparations delivered to our location that we are purchasing from you which fall within the priority chemicals groups (priority substances attached in Appendix 1). By “present” is meant above **laboratory detection limit**.

**Chemical Supplier Name:** \_\_\_\_\_

Please return this form not later than \_\_\_\_\_

Chemical name	Priority Substance Name	CAS number(s)	Concentration	Target date to eliminate (if known or planned)	Remarks

If you are submitting a completely blank sheet please let us know the reason (choose only one option):

- ☐ We do not know whether any of the priority substance is present in our chemical
- ☐ We have all references and they prove **ALL** chemicals we deliver to your factory are free of these priority substances
- ☐

Other \_\_\_\_\_

The undersigned is an owner, director, officer or managing agent authorized to sign this document on behalf of the chemical supplier identified below:

**Name (Please Print):** \_\_\_\_\_

**Position:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

**Address of chemical supplier:** \_\_\_\_\_

**Date**

**(yy/mm/dd):** \_\_\_\_\_ **Signature:** \_\_\_\_\_

**Company Stamp**

## **Form 3: Purchase Order Form**

### **Purpose**

To ensure that all chemical suppliers' purchasing staff is aware of the factory's purchasing requirements.

### **Template**

Purchasing shall print the following statements on all chemical purchase orders:

We are committed to eliminating the LS&Co. MRSL priority chemical groups from our processes: .

We will to contact you for further information about the products or substances supplied for your declarations, and other information including our Priority Substances Disclosure Form

We do not accept shipments, or samples, without fully completed Safety Data Sheets, all Safety Data Sheets must be aligned with the Global Harmonized System (GHS).

Hereby you agree if legally allowed to take back your empty packaging upon request and/or if we no longer use the chemical you supply us we return the chemical back to you in its original packaging for proper handling and disposal.

## Form 4: Chemicals Hazard Tracking Sheet

ALL HAZARDS NOT ONLY THE MRSL CATEGORIES

Following is an example of the minimum fields required on a tracking sheet for identifying substance hazards:

Commercial name of chemical

Name of chemical manufacturer

Category (production, sanitary...)

Safety Data Sheet Y/N

Priority Disclosure Form Y/N

Technical Data Sheet Y/N

LS&Co. Chemical Information Log Sheet Y/N/na

Priority substances present

CAS number for each hazardous substance

Priority substance Y/N

R phrases

S phrases

Required hazard symbols

Required PPE

Packaging e.g. 10KG Bags

Average Amount

Physical state (powder, liquid, granules etc.)

Where stored

Storage instructions (e.g. segregation rule to apply, no direct sunlight etc)

Waste management Instructions

## Form 5: Priority Substance Log

The factory's priority substance log shall be prepared and a phase out plan shall be included in the log.

Name of the product	Priority substance name	CAS number	Phase out plan details
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




## Form 6: Priority Material Log

Refer to LS&Co. RSL for testing incoming materials (fabric, sundries...etc.)

Incoming raw material identification	Priority substance name	CAS number	Supplier name	Action plan agreed with supplier for elimination
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## Form 7: Workplace Hazard Map

This plan intentionally includes good and bad practices and examples for training purposes only.

<p><b>Sewing</b></p> 	<p><b>Spraying</b></p>   	<p><b>Finishing</b></p>     	<p><b>Curing</b></p> 	<p><b>Laundry</b></p>  <p>R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment  R24/25 - Toxic in contact with skin and if swallowed  R14/15 - Reacts violently with water, liberating extremely flammable gases</p>	<p><b>Maintenance</b></p>      
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## Appendix 5: DEFINITIONS

In this document **Vendor**: Direct business partner for LS&Co.

In this document **Supplier**: Chemical or raw material supplier for LS&Co. vendors

**Substance**: see definition in REACH regulation. In practical terms substance means a product from a chemical reaction or from a recovery process or from nature as separated.

**Chemical**: mixture, preparation, brand product, auxiliary, or even a substance, e.g. toluene used as solvent. Using the definitions of REACH, a chemical means a mixture or a substance having a function used by the receiver of the product. A new term for this type of product is specialty chemical.

**Chemical supplier**: supplier of chemicals generally under brand name

**Raw material**: fiber, parts, components from which the final product is produced together with any pigment, paint, resin layer, preservative, etc. which have been incorporated in or on the product. They may contain priority substance(s), which is controlled through our RSL.

**Priority substance**: In any document referring to our RSSP priority substance means a substance listed in the Appendix 1, in the MRSL. This meaning is different from the meaning hazardous which is a substance or a mixture that is classified as hazardous according to the Globally Harmonized System (GHS).

**Priority chemical**: means a chemical which contains priority substance(s)

**Hazardous Substance**: We adopt the definition of the Joint Roadmap (URL):  
<http://www.roadmaptozero.com/joint-roadmap.php>

**Zero Discharge** from Joint Roadmap:  
<http://levistrauss.com/sites/levistrauss.com/files/librarydocument/2012/6/ls-co-zdhc-commitment.pdf> and  
<http://levistrauss.com/sites/levistrauss.com/files/librarydocument/2012/12/levi-strauss-greenpeace-detox-solution-commitment-12-dec-2012.pdf>

**Precautionary Principle**:

the principle that the introduction of a new product or process whose ultimate effects are disputed or unknown should be resisted.

- United Nations General Assembly. 1992. Report of The United Nations Conference on Environment and Development, Annex I, Rio Declaration on Environment and Development, Rio de Janeiro, 3–14 June 1992.

Principle 15 defines the precautionary approach as: Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.



**Right to Know:**

The Right to Know (RtK) Principle is derived from Principle 10 of the 1992 Rio Declaration: "Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided".

**PRTR** : Pollutant Release and Transfer Register:

A Pollutant Release and Transfer Register (PRTR) is a national or regional environmental database or inventory of potentially hazardous chemical substances and/or pollutants released to air, water and soil and transferred off-site for treatment or disposal (source: <http://www.prtr.net/> )

**BAT**: [European Union directive](#) 96/61/EC - "best available techniques" shall mean the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole:

- "techniques" shall include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned,
- "available" techniques shall mean those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator,
- "best" shall mean most effective in achieving a high general level of protection of the environment as a whole.

## Appendix 6: REFERENCES

Joint Roadmap (URL): <http://www.roadmaptozero.com/joint-roadmap.php>

TOE (URL), LS&Co. Sustainability Guidebook:

<http://www.levistrauss.com/sites/levistrauss.com/files/librarydocument/2013/3/ls-co-ses-guidebook-2012.pdf>

RSL (URL): <http://levistrauss.com/sites/levistrauss.com/files/librarydocument/2013/4/rsl-april-2013-english.pdf>

## Appendix 7: Assessment Checklist

	This check list can be used for factory's self-assessment or for the LS&Co. assessor to assess management system implementation in factory	N/A	Yes	No
	<b>FACTORY MANAGEMENT COMMITMENT</b>			
1	Is factory able to provide a fully executed Management Commitment Form upon request regarding RSSP acceptance and implementation?	ZTV		
2	Does factory have a Technical Representative whose job details meet the requirements of LS&Co. Restricted Substances Stewardship Program?	IA		
	<b>TECHNICAL REPRESENTATIVE</b>			
3	Do the Technical Representative's daily responsibilities fulfill the LS&Co. RSSP job description?	IA		
4	Is the factory upon request able to describe and provide a written version of the factory's chemical management system as established by the Technical Representative and approved by factory's senior management upon request?	IA		
5	Is the Technical Representative able to demonstrate a 100% up-to-date chemical inventory? Does the inventory include all chemicals present in the factory (e.g., for production, on-site laboratory, maintenance, sanitary, waste water treatment, pest management)?	IA		
6	Is the Technical Representative able to demonstrate that brand- specific requirements like Restricted Substances Lists (RSL), Chemical Information Log (CIL), and Priority Substance Disclosure (PSD) Form have been communicated to all chemical and raw material suppliers before purchase?	IA		
7	Is the Technical Representative able to demonstrate that all chemicals coming into the factory are accompanied by relevant documentation (e.g., Safety Data Sheet (SDS), Technical Data Sheet.)?	IA		
8	Is the factory able to demonstrate that all chemicals coming in to the factory have been reviewed, approved and included on an Approved Chemical Supplier List and on an Approved Chemical Inventory by the Technical Representative prior to the first order and/or use of any kind , including development trials?	IA		
9	Is the Technical Representative able to demonstrate upon request that all chemicals are ordered through a centralized purchasing department?	IA		
10	Is the Technical Representative able upon request to provide a facility floor plan which identifies risks and safety requirements in each area of the factory?	IA		
11	Is the factory able upon request to provide a Priority Substances Log which summarizes phased work to reduce and where feasible substitute for and eliminate each priority substance presence in the factory's manufacturing process?	IA		
12	Has the factory established a business plan to utilize Best Available Technique BAT where feasible?	CI		
13	Has the factory established a training program regarding factory's chemical management requirements to temporary on-site contractors?	CI		
14	Is the factory willing to provide periodic publicly available reports regarding the factory's achievements and its continuing efforts to eliminate the discharge of	CI		

	priority substances?			
15	Has the Technical Representative trained all factory employees regarding safe handling and use of chemicals?	IA		
16	Do all facility employees demonstrate solid knowledge regarding the RSSP program and regarding safe chemical management in connection with their particular job?	CI		
17	Is the factory able to demonstrate that management is continually communicating to its chemical and raw material suppliers the importance of shipping chemicals/raw materials without priority substance content to factory?	IA		
18	Has the Technical Representative established a waste management system which includes regular testing of all effluent streams?	CI		
	<b>PURCHASING PRACTICES</b>			
19	Are all factory chemical purchases reviewed by both the purchasing department and the Technical Representative?	IA		
20	Do factory's purchasing practices align with the responsible chemical management system established by Technical Representative?	IA		
21	Is the factory able upon request to demonstrate that the supplier communication elements of the RSSP program are included in each purchase order?	CI		
22	Are purchasing staff and the Technical Representative each able to demonstrate that all chemicals and raw materials which are ordered are on the list of chemicals/raw materials and suppliers which has been approved by the purchasing department and the Technical Representative?	IA		
	<b>PRIORITY SUBSTANCE TRACKING</b>			
23	Is the factory able to provide, and does it regularly update, priority substance tracking sheet on composition bases for all chemicals used in the factory's production process?	CI		
24	Has the factory included in its chemical inventory all of the required data as identified in the RSSP?	IA		
25	Is the factory able to demonstrate to an assessor that the safety of each chemical listed in the factory chemical inventory has been risk evaluated and discussed with the chemical supplier?	CI		
26	Is the factory able to demonstrate for each chemical that it uses that the use is consistent with responsible chemical management as set out in the Safety Data Sheet for that chemical?	IA		
27	Is the factory able to demonstrate to the assessor that, through required review of the relevant Safety Data Sheets, use of the hazard map, and other training that each employee understands whatever risks may be associated with his or her job and knows how to conduct the work safely?	CI		
28	Is the factory able to demonstrate that a phase out plan for all priority substances on site is in place and publicly available upon request?	CI		
29	Is the factory able to demonstrate to the assessor that a list of laboratories where all incoming chemicals and raw materials can be tested for priority substance identification is available?	CI		
30	Is the factory able to demonstrate to the assessor that a list of laboratories where water, air emissions and/or sludge can be tested for priority substance identification is available?	CI		
	<b>PRIORITY SUBSTANCE DATA</b>			

31	Does the factory maintain and regularly update a Priority Substance Log which includes a phase out plan for each priority substance?	CI		
32	Does the factory maintain an official relationship with qualified laboratories able to test incoming chemicals and raw materials, and all effluent streams?	CI		
33	Is the factory able to demonstrate to the assessor a commercial contract with laboratories that are qualified to test air, waste water and sludge?	CI		
34	Has the factory management identified and discussed with LS&Co. a reputable third party organization able to upload priority substance data to a publicly available web site?	CI		
	<b>RAW MATERIALS CONTROL</b>			
35	Has the factory emphasized to all of its raw material suppliers the importance of their compliance with the RSSP?	IA		
36	Is the factory able to demonstrate to the assessor an approved list of raw material suppliers?	CI		
37	Does the factory maintain a regularly update a priority substance log for incoming raw materials and water?	IA		
38	Is the factory able to demonstrate to the assessor an established phase out program for each priority substance, if any, present in incoming raw materials?	CI		
39	Is the factory able to demonstrate that a priority material log on site is in place and publicly available upon request?	CI		
40	Is the factory able to provide to the assessor the raw material related test reports?	CI		
	<b>PRIORITY SUBSTANCE MONITORING</b>			
41	Is the factory able to demonstrate to assessor an on-site established industrial hygiene testing program?	IA		
42	Does the factory maintain a regularly updated list of laboratories and its capabilities regarding sampling and testing influent, untreated and treated effluent discharges?	CI		
43	Is the factory able to demonstrate a benchmark analysis of the factory's influent water, untreated and effluent water which is publicly available upon request?	CI		
44	Is the factory able to demonstrate a transparent monitoring program linked to the benchmark exercise?	CI		
45	Is the factory able to demonstrate to assessor the on-site established LS&Co. Global Effluent Requirement program?	IA		
	<b>TRANSPARENCY REQUIREMENTS</b>			
46	Is the factory able to provide publicly available priority substance inventory list upon request?	CI		
47	Does factory meet data and information requirements as legally required, such as annual data input in a PRTR or similar platform?	CI		
48	Is the factory able to demonstrate that voluntarily input data into PRTR or similar platform?	CI		

## Appendix 8: Guidance for Samplers and laboratories for testing of MRSL analytes

This appendix gives information to help vendors work with capable sampling and analytical services to establish where possible a benchmark of their discharge of priority substances, in line with the program carried out by LS&Co. in 2013 in pilot facilities.

### Laboratory Requirements

Laboratories must be suitably developed and equipped with a minimum performance as follows:

- Have ISO 17025 or equivalent (e.g. NELAC) certification and submit their quality assurance plan for review.
- Submit all reporting limits and detection limits for review. Table-1 and 2
- Submit all Quality Control (QC) results upon request
- Must have written, approved procedures in place for all analytical methods
- Ensure all method QC requirements are met (See QC Elements below)
- Any testing sent to another laboratory working as a sub-contractor or partner service must be communicated to the factory team
- 

### QC Elements Collected or Sent to the Field

#### 1. Trip Blank for Volatile Organic Compounds (VOCs)

The trip blank is a preserved VOA vial (44-mL) filled with organics free water at the lab facility which accompanies the VOAs used for sample collection from the lab to the sampling site, then back to the laboratory for analysis.

#### 2. Matrix spike/Matrix Spike Duplicate (MS/MSD)

Two extra aliquots must be collected in the field for any class of compounds run as MS/MSD pairs. Only the sludge and effluent samples need to be collected for MS/MSD pairs, and only once (such as the “Effluent” sample).

### Water Sample Collection Guidance for Sample Preparer

The sample preparation should follow Standard Methods 1060 (Samples should be collected following the general guidance in Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> edition, Method 1060). Notably the laboratory and/or sample collector should:

- Not rinse bottles/containers that have the preservative already added.
- Use bottles/containers that are pre-cleaned and certified by the manufacturer for collection of each sample type.
- Use glass bottles/containers whenever possible as a dipper to collect water samples.
- Use new, clean, food-grade plastic polyethylene buckets for mixing /homogenizing samples.
- Use a new bucket for each sample location (Glass is better if possible as there is a chance organic chemical in the water will absorb to the walls of the bucket.)
- Not use Teflon® (PTFE) - Teflon must not be used or come into contact with PFOS/PFOA samples.
- Minimize headspace (airspace in bottle) for all samples; volatile organic samples require zero headspace (no bubbles)
- **Not expose sample bottles/containers and sampling devices used to collect APEO samples to soaps/detergents.**

- Ensure that samples are stored at 4°C from the time of collection to the time of preparation and analysis.
- Complete chain of custody documentation.

### **Solid Waste/Sludge Sample Collection Guidance for Sample Preparer:**

The sample preparation should also follow ASTM D4687 Standard Guide for General Planning of Waste Sampling and Standard Methods 1060 (Samples should be collected following the general guidance in Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> edition, Method 1060). Some of the requirements are essentially the same as those listed above. In addition the sampler should ensure that:

- Consideration is made regarding the selection of sample location(s) and timing to best represent the variety of activities at a facility.
- Additional consideration is made regarding the development of a plan for collecting and preparing composite samples.
- Additional guidance and a preliminary sludge sampling plan is provided in Appendix XXXX.

### **Sample Receipt by the Laboratory**

The laboratory should:

1. Maintain appropriate documentation
2. Store all samples at required temperatures until analysis
3. Report any issues to the project team

### **Sample Preparation by the Laboratory**

The laboratory should:

1. Document all preparatory steps
2. Communicate any issues with the project team

### **Data Reporting by the Laboratory**

1. All samples must be reported in a hard copy and electronic data format (spreadsheet)
2. The report and the spreadsheet must include the following as a minimum:
  - a. Site Name (Factory name)
  - b. Location
  - c. Country
  - d. Lab Name
  - e. Designated sample ID
    - i. **Influent** (for water coming to the facility for processing) Example: **Influent 1001**
    - ii. **Process Water** (wastewater before treatment) Example: **Process Water 1002**
    - iii. **Effluent Direct Discharge** (water being discharge after wastewater treatment to environment) Example: **Effluent direct discharge 1003**
    - iv. **Effluent POTW** (water being discharge without treatment to POTW) Example: **Effluent POTW 1004**
3. Matrix (water, wastewater)
4. Lab Sample Identification (ID) (Influent, Process Water, Effluent)
5. Analytical Methods
6. Sample Date
7. Sample Time
8. Received Date at the Lab
9. Sample Volume
10. CAS Number
11. Analyte

12. Result
13. Reporting Unit
- 14. Detection Limit**
15. QC reports must be submitted for blanks, matrix spikes, Laboratory Control Sample (LCS)/ Laboratory Fortified Blank (LFB) / blank spikes in the e-data and hard copy.

#### **Description Sampling Locations for Water/Wastewater in the Factory:**

**Influent (1001):** The sample should be taken from water supplying the facility. If there are several sources the composite sample should be utilized. Mix the water from all sources and dilute them thoroughly and grab samples for the analysis. Please note, this sampling step should be performed **after** process water sampling.

**Process Water (1002):** This sample should be taken from the equalization tank. If there is no equalization tank available, the sample should be taken from the sedimentation tank. This sampling step should be the **first** sample taken at the factory.

**Effluent Direct Discharge (1003):** This sample should be taken after the wastewater treatment units but before discharge to the environment. This sampling step should be done **after** influent sample.

**Effluent water Discharge to POTW (1004):** If the facility discharges the wastewater to the Publicly or Privately Treatment Works (POTW), only influent and process water sampling is required.

#### **Description Sampling Locations for Sludge in the Factory:**

**Raw Sludge (2001) (only if there is no dewatering):** This sample should be taken from the tank, waste activated sludge stream, digester or thickener, whichever represents the final unit process, prior to its final disposition, at the facility for that particular sludge. The facility may have several different raw sludges.

**Dewatered Sludge (2002):** This sample should be taken after any dewatering units, but prior to additional drying (if employed). Again, the facility may have more than one dewatering line.

**Dried Sludge (2003):** If the facility dries sludge on drying beds or in open containers prior to offsite disposal, the sample should be collected at this point just prior to its offsite disposition, or after a designated time in the drying beds.

## Appendix 9:

### Test Methods for water testing of the 11 Priority Chemical Group Substances

The following table gives the test methods for water testing for the priority substances. Although required as part of laboratory reports as expressed in Appendix 8 (Data Reporting by the Laboratory), it is important to emphasize the need for analytical laboratories to include the Detection Limit for each result given, otherwise results cannot be interpreted.

Compound Name	CAS Number	Water Test Methods	Sludge Test Methods
<b>Phthalates (Ortho-phthalates)</b>			
Di-2-ethylhexyl phthalate (DEHP)	117-81-7	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and EPA 3540C)
butyl benzyl phthalate (BBP)	85-68-7	GC/MS (U.S. EPA 8270D and EPA 3510C )	GC/MS (U.S. EPA 8270D and 3540C)
dibutyl phthalate (DBP)	84-74-2	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
diethyl phthalate (DEP)	84-66-2	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
dimethyl phthalate (DMP)	131-11-3	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
di-n-octyl phthalate (DNOP)	117-84-0	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
di-isononyl phthalate (DINP)	28553-12-0 & 68515-48-0	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
di-iso-decyl phthalate (DIDP)	26761-40-0 & 68515-49-1	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
di-isobutyl phthalate (DIBP)	84-69-5	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
di-n-hexyl phthalate (DnHP)	84-75-3	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
Di-n-Propyl Phthalate (DPRP)	131-16-8	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
Di-cyclohexyl Phthalate (DCHP)	84-61-7	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
Dinonyl Phthalate (DNP)	84-76-4	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
Di-iso-octyl Phthalate (DIOP)	27554-26-3	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
Dimethoxyethyl Phthalate (DMEP)	117-82-8	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl phthalate esters (DHNUP)	68515-42-4	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl phthalate esters, C7-rich (DIHP)	71888-89-6	GC/MS (U.S. EPA 8270D and EPA 3510C)	GC/MS (U.S. EPA 8270D and 3540C)
<b>Flame retardants</b>			
<i>Polybromodiphenyl ethers (PBDEs)</i>			
Decabromodiphenyl ether (BDE-209)	1163-19-5	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and 3540C
Octabromodiphenyl ethers (BDE-183 and BDE-197)	207122-16-5 and unspecified	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and 3540C



<i>Compound Name</i>	CAS Number	Water Test Methods	Sludge Test Methods
Pentabromodiphenyl ethers (BDE-99 and BDE-47)	60348-60-9 and 5436-43-1	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and 3540C
Tris(2,3-dibromopropyl) phosphate (TRIS)	126-72-7	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and 3540C
Tetrabromobisphenol A (TBBPA)	79-94-7	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Bis(2,3-dibromopropyl) phosphate	5412-25-9	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Hexabromocyclododecane (HBCDD)	3194-55-6	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
<i>Polybrominated biphenyls (PBBs)</i>			
BB-153	59080-40-9	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
BB-180	67733-52-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
BB-209	13654-09-6	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Tris(1-aziridinyl)phosphine oxide) (TEPA)	545-55-1	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
<b>Amines from Azo dyes</b>			
2,4,5-Trimethylaniline	137-17-7	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
4-Methoxy-m-phenylenediamine	615-05-4	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
4-Methyl-m-phenylenediamine	95-80-7	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,4-Xylidine	95-68-1	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,6-Xylidine	87-62-7	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2-Naphtylamine	91-59-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
3,3'-Dichlorobenzidine	91-94-1	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
3,3'-Dimethoxybenzidine	119-90-4	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
4,4'-Methylenedi-o-toluidine	838-88-0	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
3,3'-Dimethylbenzidine	119-93-7	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C

Compound Name	CAS Number	Water Test Methods	Sludge Test Methods
4,4'-Diaminodiphenylmethane	101-77-9	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
4,4'-Oxydianiline	101-80-4	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
4,4'-Thiodianiline	139-65-1	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
4-Aminobiphenyl	92-67-1	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
4-Chloroaniline	106-47-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
4-Chloro-o-toluidine	95-69-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
5-Nitro-o-toluidine	99-55-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Aminoazobenzene	60-09-3	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Benzidine	92-87-5	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
o-Aminoazotoluene	97-56-3	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
o-Anisidine	90-04-0	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
o-Toluidine	95-53-4	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
6-methoxy-m-toluidine	120-71-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
<b>Dyes-Navy Blue Colorant</b>			
Component 1: C39H23ClCrN7O12S2·2Na	118685-33-9	U.S. EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Component 2: C46H30CrN10O20S2·3Na	Not Allocated	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
<b>Dyes-Carcinogenic or Equivalent Concern</b>			
C.I. Direct Black 38	1937-37-7	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
C.I. Direct Blue 6	2602-46-2	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
C.I. Acid Red 26	3761-53-3	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
C.I. Basic Red 9	569-61-9	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
C.I. Direct Red 28	573-58-0	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
C.I. Basic Violet 14	632-99-5	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
C.I. Disperse Blue 1	2475-45-8	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
C.I. Disperse Blue 3	2475-46-9	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
C.I. Basic Green 4 (malachite green chloride)	569-64-2	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
C.I. Basic Green 4 (malachite green oxalate)	2437-29-8	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
C.I. Basic Green 4 (malachite green)	10309-95-2	U.S. EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B

<i>Compound Name</i>	CAS Number	Water Test Methods	Sludge Test Methods
Disperse Orange 11	82-28-0	U.S. EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
<b>Dyes-Disperse or Sensitizing</b>			
Disperse Yellow 1	119-15-3	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Blue 102	12222-97-8	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Blue 106	12223-01-7	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Yellow 39	12236-29-2	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Orange 37/59/76	13301-61-6	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Brown 1	23355-64-8	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Orange 1	2581-69-3	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Yellow 3	2832-40-8	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Red 11	2872-48-2	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Red 1	2872-52-8	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Red 17	3179-89-3	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Blue 7	3179-90-6	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Blue 26	3860-63-7	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Yellow 49	54824-37-2	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Blue 35	12222-75-2	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Blue 124	61951-51-7	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Yellow 9	6373-73-5	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Orange 3	730-40-5	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
Disperse Blue 35	56524-77-7	U.S.EPA Method 8321B	ISO 16373-2 modified or EPA Method 8321B
<b>Organotin Compounds</b>			
Dibutyltin (DBT)	1002-53-5	DIN EN 17353	CEN ISO 23161
Dimethyltin (DMT)	Various	DIN EN 17353	CEN ISO 23161
Monobutyltin (MBT)	Various	DIN EN 17353	CEN ISO 23161
Monooctyltin (MOT)	Various	DIN EN 17353	CEN ISO 23161
Trimethyltin (TMT)	Various	DIN EN 17353	CEN ISO 23161
Tributyltin (TBT)	56573-85-4	DIN EN 17353	CEN ISO 23161
Tetrabutyltin (TBT)	Various	DIN EN 17353	CEN ISO 23161
Trioctyltin (TOT)	Various	DIN EN 17353	CEN ISO 23161
Tripropyltin (TPT)	Various	DIN EN 17353	CEN ISO 23161
Diocetyltn (DOT)	Various	DIN EN 17353	BS EN ISO 23161
Triphenyltin (TPHT)	668-34-8	DIN EN 17353	BS EN ISO 23161

<i>Compound Name</i>	CAS Number	Water Test Methods	Sludge Test Methods
Tricyclohexyltin (TCyHT)	Various	DIN EN 17353	BS EN ISO 23161
<b>Chlorobenzenes and Chlorotoluenes</b>			
Chlorobenzene	108-90-7	U.S. EPA 8270D and EPA 3510C or EPA 8260	U.S. EPA 8270D and EPA 3540C or EPA 8260 and EPA 5035A
4-Chlorotoluene	106-43-4	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C or EPA 8260 and EPA 5035A
1,2-Dichlorobenzene	95-50-1	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
1,3-Dichlorobenzene	541-73-1	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
1,4-Dichlorobenzene	106-46-7	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
1,2,4-Trichlorobenzene	120-82-1	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
1,2,3-Trichlorobenzene	87-61-6	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
1,3,5-Trichlorobenzene	108-70-3	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
1,2,3,4-Tetrachlorobenzene	634-66-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
1,2,3,5-Tetrachlorobenzene	634-90-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
1,2,4,5-Tetrachlorobenzene	95-94-3	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Pentachlorobenzene	608-93-5	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Hexachlorobenzene	118-74-1	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2-Chlorotoluene	95-49-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
3-Chlorotoluene	108-41-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
4-Chlorotoluene	103-43-4	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,3-Dichlorotoluene	32768-54-0	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,4-Dichlorotoluene	95-73-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,5-Dichlorotoluene	19398-61-9	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,7-Dichlorotoluene	118-69-4	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
3,4-Dichlorotoluene	95-75-0	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,3,6-Trichlorotoluene	2077-46-5	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,4,5-Trichlorotoluene	6639-30-1	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Benzotrichloride	98-07-7	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Alpha, 2,4-trichlorotoluene	94-99-5	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Alpha, 2,6-trichlorotoluene	2014-83-7	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Alpha, 3,4-trichlorotoluene	102-49-6	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Alpha,alpha-2,6-tetrachlorotoluene	81-19-6	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Alpha,alpha, alpha-2-tetrachlorotoluene	2136-89-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Alpha,alpha, alpha-4-tetrachlorotoluene	5216-25-1	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,3,4,5,6-Pentachlorotoluene	877-11-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
<b>Chlorinated and Aromatic solvents</b>			
1,2-Dichloroethane	107-06-2	U.S. EPA 8260C and EPA 5030C	U.S. EPA 8260C and EPA 5035A

<i>Compound Name</i>	CAS Number	Water Test Methods	Sludge Test Methods
Methylene chloride	75-09-2	U.S. EPA 8260C and EPA 5030C	U.S. EPA 8260C and EPA 5035A
Tetrachloroethene	127-18-4	U.S. EPA 8260C and EPA 5030C	U.S. EPA 8260C and EPA 5035A
Trichloroethene	79-01-6	U.S. EPA 8260C and EPA 5030C	U.S. EPA 8260C and EPA 5035A
Benzene	71-43-2	U.S. EPA 8260C and EPA 5030C	U.S. EPA 8260C and EPA 5035A
Xylenes	1330-20-7	U.S. EPA 8260C and EPA 5030C	U.S. EPA 8260C and EPA 5035A
<b>Glycols</b>			
Bis(2-methoxyethyl)-ether	111-96-6	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE
2-Ethoxyethanol	110-80-5	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE
2-Ethoxyethyl acetate	111-15-9	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE
Ethylene glycol dimethyl ether	110-71-4	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE
2-Methoxyethanol	109-86-4	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE
2-Methoxyethylacetate	110-49-6	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE
2-Methoxypropylacetate	70657-70-4	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE
Triethylene glycol dimethyl ether	112-49-2	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE	U.S.EPA Method 8015D modified with ENVI-Carb Plus SPE
<b>Chlorophenols and Cresols</b>			
Pentachlorophenol	87-86-5	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,3,4,6-Tetrachlorophenol	58-90-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,3,4,5-Tetrachlorophenol	4901-51-3	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,3,5,6-Tetrachlorophenol	935-95-5	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,4,6-Trichlorophenol	88-06-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,3,4-Trichlorophenol	15950-66-0	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,3,5-Trichlorophenol	933-78-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,3,6-Trichlorophenol	933-75-5	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,4,5-Trichlorophenol	95-95-4	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
3,4,5-Trichlorophenol	609-19-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,3-Dichlorophenol	576-24-9	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,4-Dichlorophenol	120-83-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2,5-Dichlorophenol	583-78-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
3,4-Dichlorophenol	95-77-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
3,5- Dichlorophenol	591-35-5	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
2-Chlorophenol	95-57-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
3-Chlorophenol	108-43-0	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
4- Chlorophenol	106-48-9	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
o-Cresol	95-48-7	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
p-Cresol	106-44-5	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C

<i>Compound Name</i>	CAS Number	Water Test Methods	Sludge Test Methods
m-Cresol	108-39-4	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
<b>Short Chain Chlorinated Paraffins (SCCP) with C10 – C13</b>			
Short Chain Chlorinated Paraffins (SCCP) with C10 – C13	85535-84-8	ISO/PRF 12010	ISO 12010 modified and EPA 3540C
<b>Heavy Metals</b>			
Chromium, hexavalent, Cr(VI)	7440-47-3	U.S.EPA 7199	U.S. EPA 7199 and EPA 3060A
Lead, Pb	7439-92-1	U.S.EPA 3015A & 6010/6020A	U.S. EPA 6010 and EPA 3050B
Cadmium, Cd	7440-43-9	U.S. EPA 3015A & 6010/6020A	U.S. EPA 6010 and EPA 3050B
Mercury, Hg	7439-97-6	U.S. EPA 7470	U.S. EPA 7471
Arsenic, As	7440-38-2	U.S. EPA 3015A & 6010/6020A	U.S. EPA 6010 and EPA 3050B
<b>APEO</b>			
Nonylphenol (NP) ,mixed isomers	104-40-5, 11066-49-2, 25154-52-3, 8452-15-3	DIN EN ISO 18857-2 or ASTM D7065	DIN EN ISO 18857-2 modified or ASTM D7065 modified
Octylphenol (OP), mixed isomers	140-66-9, 1806-26-4, 27193-28-8	DIN EN ISO 18857-2 or ASTM D7065	DIN EN ISO 18857-2 modified or ASTM D7065 modified
Nonylphenoethoxylates (NPEOs)	9016-45-9, 26027-38-3, 37205-87-1, 68412-54-4, 127087-87-0	DIN EN ISO 18857-2 or ASTM D7065	DIN EN ISO 18857-2 modified or ASTM D7065 modified
Octylphenoethoxylates, (OPEOs)	9002-93-1, 9036-19-5, 68987-90-6	DIN EN ISO 18857-2 or ASTM D7065	DIN EN ISO 18857-2 modified or ASTM D7065 modified
<b>Polycyclic Aromatic Hydrocarbons (PAHs)</b>			
Benzo[a]pyrene (BaP)	50-32-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Anthracene	120-12-7	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Pyrene	129-00-0	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Benzo[ghi]perylene	191-24-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Benzo[e]pyrene	192-97-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Indeno[1,2,3-cd]pyrene	193-39-5	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Benzo[j]fluoranthene	205-82-3	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Benzo[b]fluoranthene	205-99-2	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Fluoranthene	206-44-0	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Benzo[k]fluoranthene	207-08-9	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Acenaphthylene	208-96-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Chrysene	218-01-9	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Dibenz[a,h]anthracene	53-70-3	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Benzo[a]anthracene	56-55-3	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Acenaphthene	83-32-9	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C

<i>Compound Name</i>	<i>CAS Number</i>	<i>Water Test Methods</i>	<i>Sludge Test Methods</i>
Phenanthrene	85-01-8	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Fluorene	86-73-7	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
Naphthalene	91-20-3	U.S. EPA 8270D and EPA 3510C	U.S. EPA 8270D and EPA 3540C
<b>Perfluorinated Chemicals (PFCs)</b>			
Perfluorooctanoic acid (PFOA)	335-95-5	ISO 25101	CEN/TS 15968 modified
Perfluorononanoic acid (PFNA)	375-95-1	ISO 25101	CEN/TS 15968 modified
Perfluorodecanoic acid (PFDA)	335-76-2	ISO 25101	CEN/TS 15968 modified
Perfluoroundecanoic acid (PFUnA)	2058-94-8	ISO 25101	CEN/TS 15968 modified
Perfluorododecanoic acid (PFDoA)	307-55-1	ISO 25101	CEN/TS 15968 modified
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	ISO 25101	CEN/TS 15968 modified
Perfluorotetradecanoic acid (PTFA)	376-06-7	ISO 25101	CEN/TS 15968 modified
Perfluorooctane sulfonate (PFOS)	1763-23-1	ISO 25101	CEN/TS 15968 modified
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	ISO 25101	CEN/TS 15968 modified

