**27 February 2017**

**California Department of Toxic Substances Control (DTSC): AFIRM Comments on Continued Uses of Nonylphenol Ethoxylates in Clothing Products**

## Introduction

The Apparel and Footwear International RSL Management (AFIRM) Group welcomes this opportunity to provide DTSC with information on the use of nonlyphenol ethoxylates (NPEs) in clothing products as part of the Safer Consumer Products (SCP) prioritization process. NPEs have historically played a significant role in a wide variety of apparel and footwear manufacturing processes, and AFIRM seeks to demonstrate the substantial progress made to date replacing them with safer alternatives. Given the policy goals of implementing the SCP Regulations, AFIRM recommends focusing DTSC and industry resources on other priorities since NPEs are on their way to elimination from global apparel and footwear manufacturing.

The AFIRM Group was established in 2004 with a mission to reduce the use and impact of harmful substances in the apparel and footwear supply chain. As a technical center of excellence, AFIRM members recognize the importance of using sound science and risk assessment principles to better manage chemicals within their supply chains and products. Members include adidas-Group, ASICS, Bestseller, C&A, Carhartt, ESPRIT, Gap Inc., Gymboree, H&M, Hugo Boss, J.Crew, LACOSTE, Levi Strauss & Co., Lululemon Athletica, New Balance, Nike, Pentland, PUMA, PVH, s.Oliver, Under Armour and VF Corporation. Since its founding, AFIRM has developed tools to assist the supply chain in implementing restricted substance lists (RSLs), presented live training on chemicals management to thousands of apparel and footwear suppliers, and developed an industry best-practice RSL in December 2015 (revised December 2016) that has been adopted by multiple leading brands. More information is available at www.afirm-group.com.

## Theme 1. Nonylphenol ethoxylates in cleaning and clothing products

AFIRM members have long understood the importance of reducing and working towards the elimination of intentional use of NPEs in apparel and footwear manufacturing. Many AFIRM brands have voluntarily restricted NPE use for years, and through their efforts and those of organizations like AFIRM, AAFA (American Apparel & Footwear Association) and ZDHC (Zero Discharge of Hazardous Substances Foundation), the apparel and footwear industry has made significant strides towards complete replacement of NPEs with safer alternatives. Answers to the questions presented under Theme 1 of DTSC's Priority Product Work Plan including specific examples of industry's progress are included below.

## What are the challenges associated with removing NPEs from the clothing supply chain?

The versatility, outstanding performance characteristics, affordability, and widespread availability of NPEs meant they were preferred by manufacturers throughout the apparel and footwear supply chain for many years. Their ubiquitous presence coupled with a lack of transparency into their use in many different production processes have presented challenges for industry in working towards quick replacements.

Historically, the most common uses of NPEs in apparel and footwear manufacturing were as an industrial surfactant and scouring agent. Surfactants are essential ingredients in laundry detergents while scouring agents are used to prepare textiles and other materials for dyeing and finishing by removing oils, dirt, and process chemicals from earlier stages of production. When used for these purposes, NPEs may be introduced at multiple points in the supply chain, often making it difficult to identify the party or process responsible for their presence in finished products. Less obvious uses of NPEs include but are not limited to: ingredients in lubricants for fabric, yarn, and fiber manufacturing, an emulsifier/dispersing agent for dyes and prints, and as a de-gumming agent for silk production. In addition, NPEs may be found in onsite cleaning agents and fire extinguishers used in manufacturing facilities, resulting in unpredictable contamination of apparel and footwear materials and products.

Given their wide use, eliminating every possible source of NPEs in the supply chain has been and continues to be a challenging task. The challenge is not only in identifying where NPEs are being used in the value chain, but also in reworking diverse chemical formulations to eliminate their use without introducing regrettable substitutions or adversely affecting product quality and performance. Each process utilizing NPEs requires its own unique solution, and what works in one formulation and process does not necessarily work for other formulations and processes. There are rarely simple "drop-in" replacements that work across multiple, varied uses of NPEs. Success is dependent on having sufficient time to educate manufacturers up and down the supply chain on the need to replace NPEs as well as time to allow them to adjust and optimize manufacturing processes to accommodate safer alternatives.

Another challenge faced by apparel and footwear brands working diligently to remove NPEs and other substances of concern from product manufacturing is the complexity of the global supply chain. Apparel and footwear products typically go through multiple tiers of manufacturing with materials and parts sourced from or processed in different facilities separated not only by function but also geographic location. A single product may include materials from multiple countries and be shipped across national borders for assembly and finishing. Facilities in countries like China and India manufacture materials and products for multiple brand clients, including AFIRM brands who restrict NPEs and domestic brands who do not restrict NPEs as part of their procurement policies. Overseas facilities that continue to use NPEs for their domestic brand clients unavoidably contaminate products of those brands for which NPE use restrictions are in place. Additionally, many commercially available chemical formulations contain trace levels of NPEs as impurities or byproducts of chemical manufacturing processes, which often leads to contamination in finished products.

## What progress has been made to remove NPEs from the clothing supply chain, given the recent restriction in the European Union (EU)?

There has been substantial progress removing NPEs from the apparel and footwear supply chain largely due to progressive, voluntary efforts of industry leading brands and collaborative efforts of organizations like AFIRM, AAFA, and ZDHC. The forthcoming restriction on NPEs in the EU will only apply to textile products beginning February 2021, but this is already assisting the greater effort to phase out these substances as more and more brands across the industry adopt restrictions on NPEs in

preparation. In non-textile products, such as natural leather goods, the phase out of NPEs is still being exclusively led by progressive, voluntary efforts since these are not within scope of the EU restriction.

## AFIRM Group Efforts

AFIRM Brand Restrictions

Since as early as 1999 some AFIRM brands have been leading industry efforts to restrict the use of NPEs through supply chain education, guidance documents, and progressively tighter limits on NPEs in apparel and footwear materials. In 2003 NPEs were prohibited in chemical formulations used within the EU for textile and leather processing with a de minimis concentration limit of 0.1% (1000pm) and exemptions for facilities not discharging wastewater or that fully treat process water before it goes to wastewater treatment.[1] Many AFIRM brands voluntarily applied this 1000ppm limit to apparel and footwear materials and have been gradually lowering the limit with a goal of consistently achieving 100ppm over time. AFIRM determined 100ppm to be an aspirational yet feasible limit within a few years' time that would safely eliminate intentional use of NPEs while allowing for unintended byproducts, impurities, and contaminations that exist for the reasons stated above.[2] AFIRM brands have been working diligently as industry leaders to remove NPEs from manufacturing processes despite their wide use, and this includes working with commercial testing laboratories to develop a validated method for properly measuring NPEs in apparel and footwear products. This method was developed several years before the EU proposed restricting NPEs in textile articles or began the process of approving an official standardized method.

AFIRM Group Supplier Seminars

Since its founding in 2004, AFIRM has held six major seminars in Hong Kong, Shanghai, New Delhi, and Ho Chi Minh City to educate the supply chain on the need to properly manage and phase out restricted substances including NPEs. Thousands of suppliers have attended these seminars at the invitation of the multinational brands who comprise AFIRM's membership and a significant percentage of the global market for sourcing apparel and footwear.

AFIRM Guidance List

In 2011 AFIRM published a Guidance List of restricted substances that included the lowest limits of all AFIRM members, the goal of which was to provide a tool for the supply chain to use for purposes of meeting all AFIRM member brand requirements. The broader class of APEOs, including NPEs, OPEOs and their degradation products NP and OP, were restricted on this list.

AFIRM Toolkit

Also in 2011, AFIRM published the second version of its Supplier Toolkit, a collection of resources for the apparel and footwear industry to use in implementing a restricted substance management program within their brands and supplier manufacturing facilities. The Toolkit includes information on the use of NPEs in apparel and footwear manufacturing along with recommendations and helpful tools for phasing them out. The toolkit can be found here: http://afirm-group.com/toolkit/

[1] See Entry 46 of Annex XVII to REACH

[2] AFIRM submitted two rounds of comments to the European Commission during the consultation phase of the proposal to restrict NPEs in textile articles now included as Entry 46a of Annex XVII to REACH. The AFIRM recommended limit of 100ppm and timeframe for adoption were accepted by the EU Commission.

AFIRM Restricted Substances List (RSL)

In 2015 AFIRM published an industry best practice RSL that many of its members have subsequently adopted in place of their own RSLs, an important step for eliminating barriers to compliance across the shared supply chain. Updated just before 2017, this list restricts the broader class of APEOs, including NPEs, OPEOs, and their degradation products NP and OP, to 100ppm. The list can be found here: http://afirm-group.com/wp-content/uploads/2016/12/2017-AFIRM_RSL_2016_1214.pdf

AFIRM Progress

At least one major AFIRM brand with detailed information on NPE use throughout its extended supply chain has seen a 90% decrease in their use in the production of its products based on statistically significant testing data dating back to 2009. This has been achieved through product testing coupled with education of vendors on safer alternatives and corrective action plans. Similar efforts have been underway at multiple other AFIRM brands for the last several years.

## AAFA Efforts

AAFA RSL

The American Apparel & Footwear Association maintains a restricted substance list based on strictest global legislation. NPEs have been included on the list with a limit of 100 ppm since the EU adopted its restriction on NPEs in textile articles slated to come into effect in 2021. The list can be found here: https://www.wewear.org/assets/1/7/RSL_Round_17_April_2016.pdf

AAFA Supplier Seminars

AAFA has held numerous seminars across the globe to educate the supply chain on restricted substances management and phase out, including NPEs.

## ZDHC Efforts

The Zero Discharge of Hazardous Substances Program was launched in 2011 with a mission to advance towards zero discharge of hazardous chemicals in the apparel and footwear supply chain and act to improve the environment and people's wellbeing. Elimination of APEOs (including NPEs) has been a top priority of the group's 22 brand contributors and multiple supply chain affiliates since its founding. Specific efforts include:

Manufacturing Restricted Substance List (MRSL)

In 2014, ZDHC published the first version of its Manufacturing Restricted Substances List (MRSL), which banned intentional use of NPEs in chemical formulations used in the production of textile apparel and footwear products. Unlike a product RSL, which sets substance restrictions in materials and finished products with verification conducted via material and product testing, a MRSL sets limits on restricted substances in the chemical formulations used to produce apparel and footwear materials with conformity assessed through testing, declarations, and 3rd party certification systems. Input chemistry control systems, such as the MRSL, support product RSL programs by providing greater clarity to manufacturers on the substances and formulations which cannot be used in the production of apparel and footwear. The ZDHC MRSL was subsequently updated in 2015 to cover chemical formulations used in leather processing. Among the brands, industry associations, and suppliers who have adopted the MRSL, NPEs are banned from use in all textile and leather production processes with a goal of complete elimination of intentional use by the year 2020. The MRSL can be found here: http://www.roadmaptozero.com/fileadmin/pdf/MRSL_v1_1.pdf

ZDHC Guidance Sheet and Safer Alternatives

In 2014 ZDHC published a Guidance Sheet on NPEs which includes actionable instructions for brands and suppliers to use to replace them with safer alternatives. The Guidance Sheet includes a list of Safer Alternatives provided by the U.S. Environmental Protection Agency Design for the Environment Program. The NPE Guidance sheet has been widely disseminated throughout the supply chain and can be found here: http://www.roadmaptozero.com/fileadmin/layout/media/downloads/en/NPEO.pdf

Progress

ZDHC has engaged international chemical, textile, leather, and apparel and footwear associations as well as chemical suppliers and apparel and footwear manufacturers in production countries to educate them on MRSL requirements and the prohibition on NPEs. This work has contributed to global awareness of the need to replace NPEs with safer alternatives and the accelerating downward trend in their use witnessed by brands who perform regular testing for them in apparel and footwear materials.

**Recommendation for the SCP Prioritization Process re: NPEs**

Since the stated goal of DTSC in implementing the SCP Regulations is to enable a robust alternative assessment process to identify safer alternatives – followed by a transition by industry to those safer alternatives facilitated by regulatory responses DTSC has at its discretion – it is unnecessary and duplicative to focus additional efforts on substituting for NPEs in clothing products.

Under the SCP Regulations, DTSC's decision to identify and list a product-chemical combination as a Priority Product shall be based on an evaluation that includes consideration of:

- The extent to which other regulatory programs regulate the product; and
- "Whether there is a readily available safer alternative that is functionally acceptable, technically feasible, and economically feasible" (CA Health and Safety Code § 69503.2).

NPEs are already being voluntary driven out of the supply chain, will be regulated in the EU in 2021, and functionally acceptable, technically feasible, and economically feasible alternatives are already being used in their place – including those assessed by the United States Environmental Protection Agency's Design for the Environment program. AFIRM therefore recommends that DTSC focus resources on substances that do not already have known safer alternatives available on the market that industry is transitioning to. DTSC, Californians, and the apparel and footwear industry would benefit from regulatory focus on seeking safer alternatives for other hazardous substances.

AFIRM appreciates DTSC's careful consideration of our comments and recommendation. We look forward to continuing engagement and future collaboration throughout implementation of the SCP Regulations.

Sincerely,

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