

2014

Valentino Fashion Group

APEOs INVESTIGATION REPORT

VALENTINO FASHION GROUP COMMITMENT

In line with its Detox Commitment, Valentino Fashion Group Spa (VFG) is taking action to achieve the elimination of APEOs¹ from its supply chain, both from processes and finished products.

Eight months after the publication of the first APEOs Investigation, in this second report VFG presents an update on progress towards this goal.

THE CHEMICAL NATURE OF APEOs

The chemical nature of this group of substances means that they are particularly effective as dispersing agents, detergents and emulsifiers in textile industry wet processes. However, the release of APEOs into waste water represents a hazard for the environment, on account of their persistence, capacity for bio-accumulation and potential for endocrine disruption (causing the feminization of fish).

VFG'S ACTIONS

VGF is pursuing with determination its Detox commitment, monitoring and progressively reducing the cases of APEOs contamination detected during routine testing of raw materials and finished products.

In addition to ongoing screening of raw materials and finished products, VFG has initiated a programme of systematic inspections at production sites within its supply chain, enlisting the support of external specialists.

The factory audit programme is designed to identify and exclude all potential sources of APEOs contamination of raw materials, as well as to motivate the key actors in the VFG supply chain to take action upstream to ensure that the goal of total elimination is reached.

APEOs ANALYSIS

For a number of years now, VFG has been conducting testing on raw materials and finished products within the context of its internal product safety procedures. In line with VFG's Detox commitment, RSL limit values were revised in November 2013, with the introduction of the best technology available for APEOs testing.

¹ Alkylphenol ethoxylates

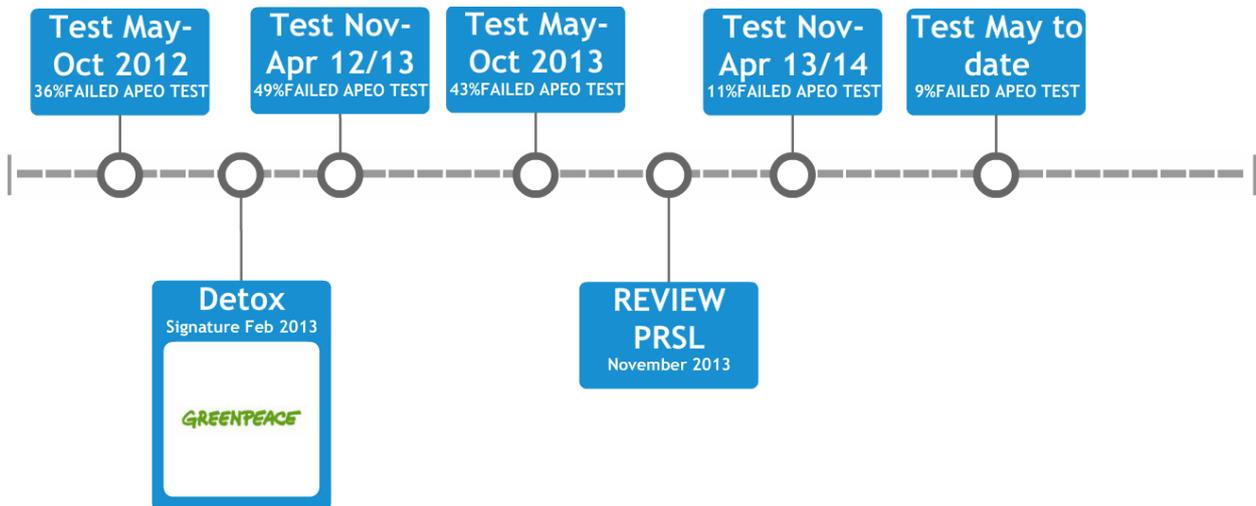
The APEOs investigation draws on test reports stored in company archives relating to raw material and finished product screening over a 2 year time horizon. Laboratory testing is based on liquid chromatography-mass spectrometry.

SCREENING RESULTS

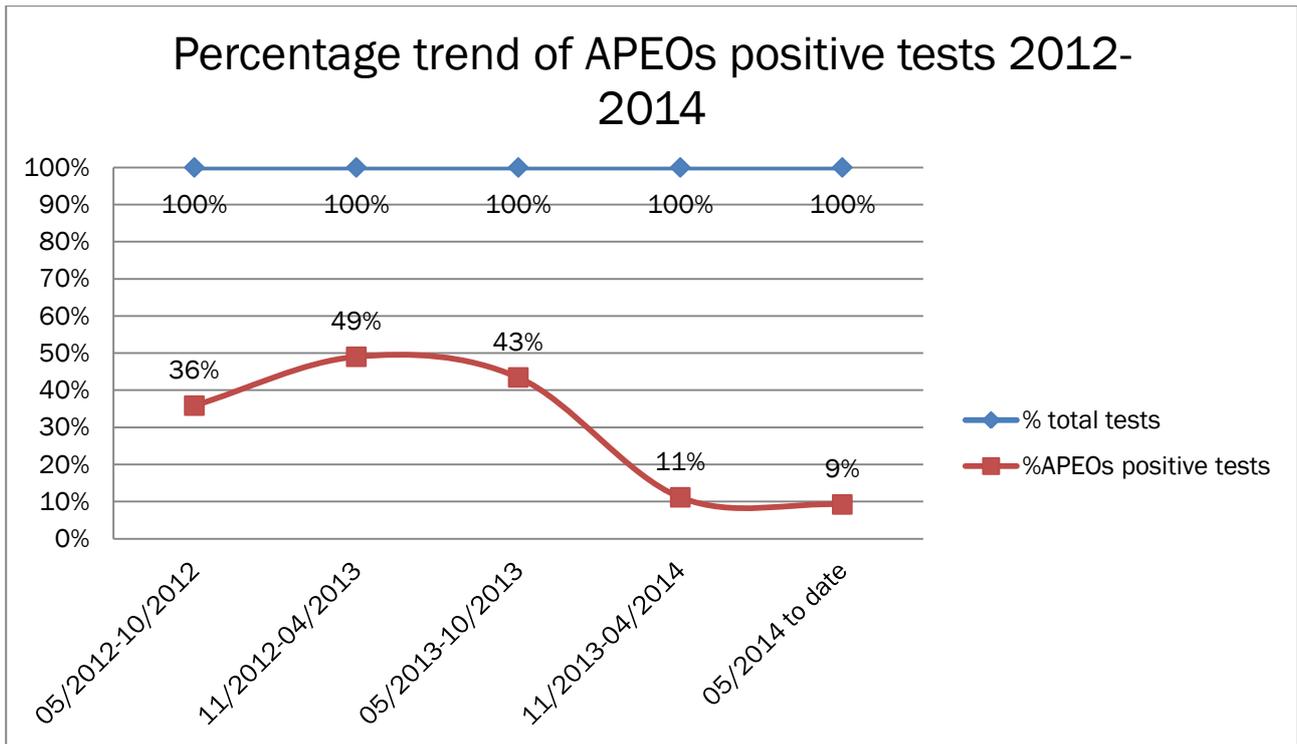
ANALYSIS OF APEOs CONTAMINATION IN RAW MATERIALS AND FINISHED PRODUCTS 2012-2014

The timeline below presents the sequence of actions undertaken by VFG to raise awareness of the goal of total APEOs elimination within its supply chain, highlighting key stages and outcomes along this pathway.

TIMELINE



The following graph presents the percentage values of positive APEOs tests in relation to the total number of tests conducted over the two year time horizon.



The graph highlights how, following a peak in APEOs positive tests in early 2013 (49%), cases of APEOs contamination diminished progressively during the course of 2014 (9% positive tests to date). This outcome reflects the efficacy of VFG’s communication within the supply chain, the readiness of suppliers to adapt to VFG’s new goals, and the careful selection of raw materials during the product design phase.

Of the 9% APEOs positive tests reported in the last semester, more than half refer to concentrations below 50 ppm. APEOs contamination is more frequent in synthetic textiles, followed by leather and fur, and finally natural textiles such as wool, silk and cotton.

VFG’s experience to date highlights how APEOs are found both in surfactants used to clean hides, as well as in tensides used for reeling and silk degumming, in detergents generally, and in lubricants that facilitate synthetic fiber processing.

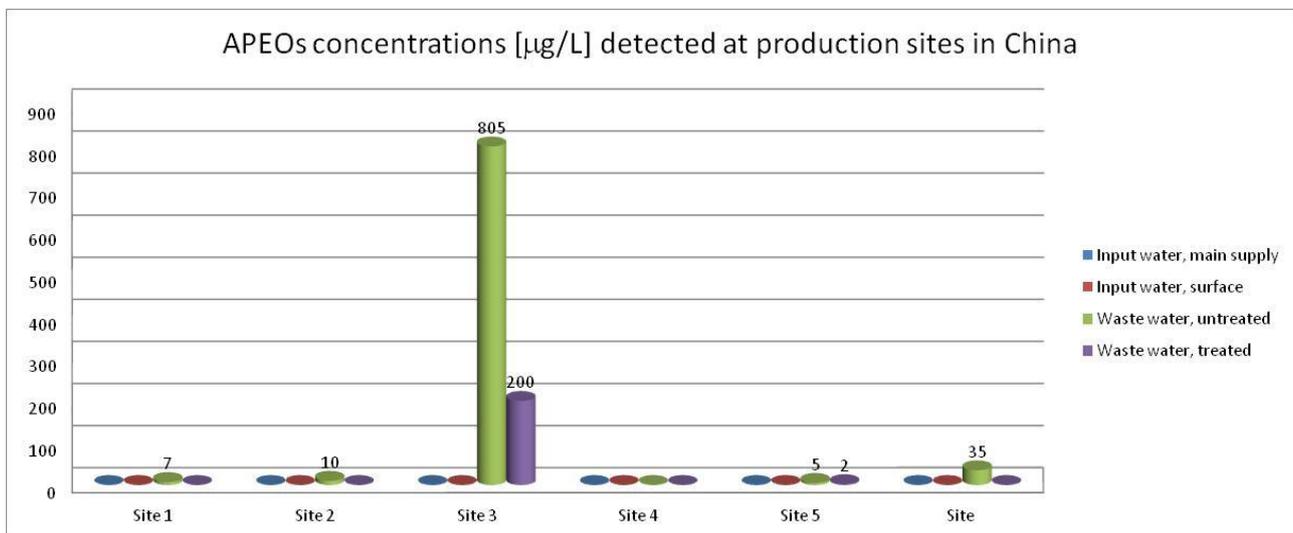
FACTORY AUDITS: APEOs IN INPUT AND WASTE WATER

During the course of 2013, VFG established a factory auditing programme to monitor input and waste waters at production sites within its supply chain. This initiative represented the first step towards a complete and conscious view of VFG's production processes.

Chemical analysis of waters at production sites in Italy and China excludes any APEO contamination of incoming waters, whereas APEOs contamination was detected in waste waters at a number of sites, both in Italy and in China.

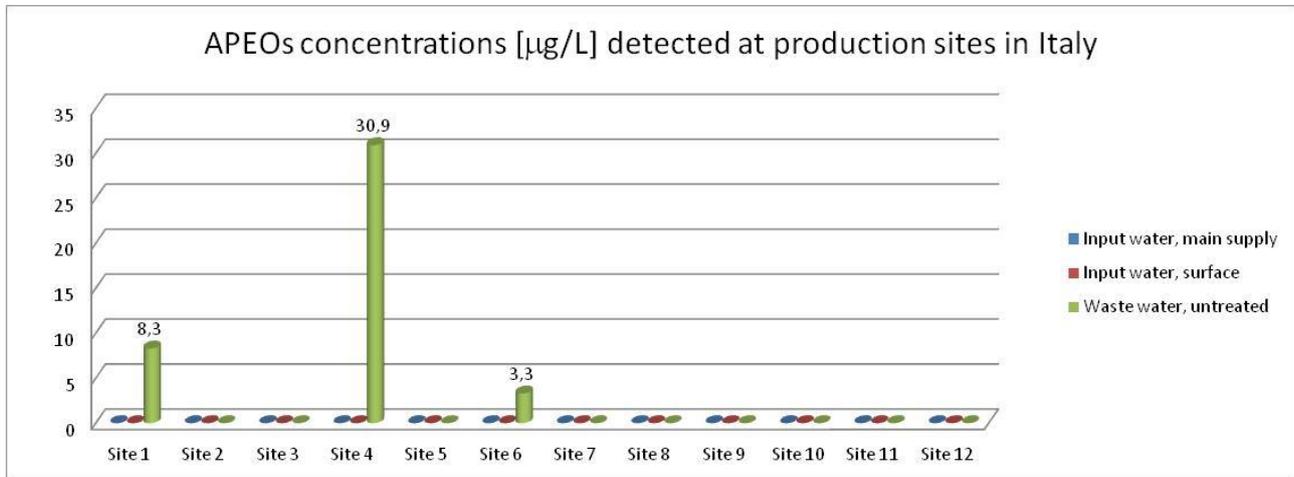
In China, five of the six sites audited in 2013 were found to be discharging APEO into the environment.

The following graph reports the concentrations [$\mu\text{g/L}$] of APEOs detected at production sites in China:



At the only two production sites where it was possible to analyze waste water after treatment, APEOs were detected even in treated waters. At the other four sites, analysis of waste waters after treatment was not possible given that waste waters are discharged into co-owned treatment facilities.

In Italy, over the last two years three out of twelve sites were found to be discharging APEOs into the environment. The graph below reports the concentrations [$\mu\text{g/L}$] of APEOs detected at production sites in Italy.



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The factory auditing programme, through assessment of onsite chemical management and input and waste water sampling, and the chemical screening of raw materials and finished products, are key environmental performance indicators (KPI) that enable VFG to define priorities for intervention and corrective actions, as well as to identify high-risk product categories and the chemical hazards inherent within its supply chain.

Wherever APEOs contamination is detected, even in trace amounts, VFG takes action in partnership with suppliers to identify the causes, to source APEOs-free alternatives and to raise awareness among raw material suppliers of VFG's environmental goals.

CONCLUSIONS

This APEOs Investigation update highlights VFG's steady progress towards its goal of achieving total elimination of APEO from the supply chain, through two lines of action: input and waste water sampling at production sites, and raw material and finished product screening.

Through factory audits, chemical screening, proactive communication of VFG's environmental goals and the active involvement of suppliers, VFG is firmly committed to achieving its goal of total elimination of APEO from its supply chain.

A number of significant initiatives are already in progress, including:

- the adoption of detection limits in line with best available technology, both in finished products through the RSL and in processes through the MRSL;
- the reformulation of supply contracts to ensure full supply chain compliance with defined limits;
- the implementation of chemical audits at all facilities in the supply chain where wet processes are carried out.

Furthermore, the active involvement of actors in the VFG supply chain has made it possible to:

- identify chemical formulations containing APEOs still in use;
- source alternative substances with comparable performance in industrial processing;
- begin systematic substitution of APEOs to reach the goal of total elimination;
- raise awareness throughout the supply chain, up to and including raw material suppliers, of the need to manufacture APEOs free products, focusing specifically on suppliers in the Global South;

Significantly, VFG's experience to date has made it possible to identify the following sources of APEOs contamination that currently jeopardize the fulfillment of the Detox goal:

- reeling of silk cocoons (APEOs are used as tensides);
- silk degumming (use of substances containing APEOs above all in the Global South);
- lubrication of spinning machines;
- cleaning of hides and fur pelts in the initial stages of tanning;

- wet processes carried out in general purpose vats that may contain traces of APEO originating from processing of materials belonging to other industry players who are less sensitive to environmental issues.

The specific case of contamination of VFG raw materials during wet processing in general purposed vats used previously to wash textiles coming from other countries and not belonging to VFG underscores both the fundamental role of the Detox campaign in raising public awareness and the need to reach out to actors beyond VFG's sphere of influence.

VFG is fully aware that only with the active participation of the entire fashion industry it is possible to deliver the desired outcomes on a global scale. VFG is closely monitoring initiatives undertaken by other firms within the context of the Fashion Duel, and is willing to take part in all collective efforts and to share its experiences with others.