



PRESS RELEASE

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SUEZ ENVIRONNEMENT DEVELOPS THE FIRST PILOT RECYCLING PROJECT FOR USED NAPPIES

1 million tonnes of nappies are thrown away in France every year. Together with wet wipes and other paper tissues, nappies are included in the "sanitary textiles" waste category, the quantity of which continues to rise in rubbish bins. These sanitary textiles currently account for 34 kg of waste per inhabitant per year¹, which equates to 9% of household waste.

On average, a baby will require 6,000 nappies in the first 2 years of life. None of this waste is currently recycled.

A RESEARCH PROGRAMME TO TEST THE FEASIBILITY OF RECYCLING NAPPIES

The *Grenelle Environnement* undertakings promoting recycling schemes, the significant quantity of nappies dumped and the increasing concern about environmental protection among the French population are all factors that indicate the emergence of a used nappy recycling market.

SUEZ ENVIRONNEMENT, with the Major Projects Department of its subsidiary SITA, has therefore undertaken a research programme aimed at assessing the potential for recycling nappies. This 340,000 euro programme has received 40% funding from ADEME, as part of the call for eco-industrial project bids organised in 2009.

By means of this research programme, known as "Happy Nappy", the Group intends to develop a nappy recycling pilot project.

A laboratory-scale research phase will be conducted at CIRSEE, SUEZ ENVIRONNEMENT'S Research and Development Centre, allowing the industrial feasibility of the assumptions, their environmental benefits and their technical and economic validity to be confirmed.

The research programme initially consists of testing a pilot project that separates and isolates the different components in the nappies and subsequently assesses the potential for recovering energy and material from the constituent elements of the nappies.

The first stage of the pilot is to crush the used nappies in order to isolate the various constituent materials: plastics 10 to 20%, superabsorbent polymers (SAP) 5 to 10%, fibres 10 to 20% and organic waste (faecal matter and urine) 50 to 70%.

These different materials can only be recycled once they are separated and isolated.

¹ ADEME 2008 Modecom Study



NAPPY RECYCLING BASED ON TRIPLE RECOVERY: ENERGY, MATERIAL AND BIOLOGICAL

The nappy recycling premise aims to achieve a triple recovery objective:

- Production of energy through biogas from organic waste
- Production of recycled materials through the recycling of plastic
- Production of compost from the residual organic waste

The nappy recovery principle is based on co-digestion, whereby the organic waste from the used nappies is mixed and fermented with sludge from the wastewater released by the Lyonnaise des Eaux treatment plants. The co-digestion will provide the biogas.

Teams from CIRSEE and its partners – INRA Narbonne, APESA² – who are experts in methanisation, have validated the nappy separation process, as well as the quality of the materials produced and the biogas. ENSAT³, which specialises in biological reclamation, is currently working on the regulatory compliance of the compost.

"The creation and positive results of this pilot project perfectly illustrate the synergies that exist between the waste and water businesses, and it is by pooling our technologies and facilities that we can envisage the creation of a new waste recovery scheme!" says Jean-Louis Chaussade, CEO of SUEZ ENVIRONNEMENT.

SUEZ ENVIRONNEMENT

Natural resources are not infinite. Each day, SUEZ ENVIRONNEMENT (Paris: SEV, Brussels: SEVB) and its subsidiaries deal with the challenge to protect resources on a daily basis by providing innovative solutions to industries and to millions of people. SUEZ ENVIRONNEMENT supplies drinking water to 91 million people, provides wastewater treatment services for 61 million people and collects the waste produced by more than 50 million people. SUEZ ENVIRONNEMENT has 79,554 employees and, with its presence on five continents, is the world's leader exclusively dedicated to environmental services. SUEZ ENVIRONNEMENT, a 35.4% GDF SUEZ affiliate, reported sales turnover of 13.9 billion euros at the end of financial year 2010.

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² INRA (Institut National de Recherche Agronomique [National Institute of Agronomic Research]), APESA (Association Pour l'Environnement et la Sécurité en Aquitaine [Association for the Environment and Security in Aquitaine])

³ ENSAT (Ecole Nationale Supérieure Agronomique de Toulouse [National Institute of Agronomy of Toulouse])