Cefic Responsible Care Awards 2008

This year saw three deserving winners of the annual Awards competition: BASF, DuPont Asturias and BioMCN. Debbie Jackson describes their achievements

For 2008, Cefic introduced a new category for small- and medium-sized enterprises (SMEs) to its Responsible Care Awards scheme. In the event, the judges chose winners not only from the large and SME categories, but also identified a third entry as worthy of a special award because of its significance to societal concerns and demonstration of global stewardship.

Francois Cornelis, then Cefic president, presented the Awards at the Cefic annual general assembly in October in Athens, Greece. He is pictured here three times with, respectively (from left to right): BASF board member Stefan Marcinowski; BioMCN's chief operations officer Paul Compagne and CEO Rob Voncken; and DuPont's Enrique Macián, country leader for Spain and Portugal, and Joaquin Martinez, Asturias site engineering manager

The winning submissions from the three companies – DuPont, BioMCN and BASF – are profiled in this section of our annual Responsible Care report. Other entries are also listed in brief and can be viewed in more detail on the Cefic website (www.cefic.org).

Sweet solution for DuPont

DuPont's Asturias site in Spain is located in the 345ha Tamon Valley, an area earmarked for conservation of the natural habitat. This entry for the Cefic Responsible Care Awards offered a simple and practical solution to a challenge which other companies could easily emulate.

The company manufactures a range of products including fibres, chemicals and crop protection products at the complex, which also houses support activities such as engineering and health, safety and environmental services as well as financial and human resource activities.

An important role is played by the site's biotreatment plant which treats effluents from various production units. Until late 2006, the biotreatment plant utilised acetic acid to maintain the necessary bacteria levels in the biological reactors.

Based on the fact that most acetic acid is produced from non-renewable resources, and prices had risen considerably in line with oil price hikes, a team at the biotreatment plant initiated a project designed to identify alternatives that would reduce consumption of the 1,039kg/day acetic acid feed. The project focused on two objectives: to optimise the operation of the biological reactors; and to seek an alternative source of biodegradable carbon.

Several alternatives were explored but were unsuccessful until discussions with industry contacts established that a local sweet maker – Chupa Chups – could offer a possible solution. The company was generating an aqueous effluent containing glucose which was sent off site for waste treatment because of its high organic load. Glucose is a renewable resource obtained from enzymatic hydrolysis of

cereals such as corn and wheat – and DuPont found it could be successfully used to replace the entire acetic acid requirement in the biotreatment plant.

This effective collaboration between the two companies meant DuPont was able to eliminate totally the use of acetic acid, a non-renewable resource, and save around €237,000/year into the bargain. And Chupa Chups found a use for a waste product that had previously cost the company nearly €27,700/year in treatment costs.

The judging panel described the DuPont entry as a "creative way of solving a problem", and liked the inter-company cooperation which not only benefited the environment but saved both parties money by exploiting this symbiosis.

This year's judging panel

The 2008 panel of judges examined a shortlist of 15 entries. They were:

- Sue Bird – policy coordinator for European employment strategy, local employment development and corporate social responsibility at the European Commission
- Jim Hopwood, consultant on personal and organisational development at Chris Bull Associates
- Paul Kaye, editor, ENDS Europe Daily
- Etienne Marchot, EFQM awards expert, EE+ Coaching
- Don Potts, environmental advisor
- Frans Kempenaars, director of environment, health & safety Benelux, Dow Benelux (last year's winner)

DuPont's Asturias site in Spain

BioMCN: a green approach to methanol

In 2008, Cefic's focus on encouraging more SMEs to participate in Responsible Care initiatives was expanded to include a special SME category in its latest Awards scheme. As an incentive, the winning company in this category was awarded a full-day expert consultancy on a Responsible Care objective or related subject of its choice.

While just a handful of SMEs entered this year, it is hoped that wider publicity for the Awards – and the free consultancy! – will ensure stronger interest in 2009.

Recently founded in November 2006, winner BioMCN is one of the first companies in the world to produce high quality bio-methanol from renewable resources on an industrial scale. It says innovation and a commitment to sustainability are key to its development of a process to achieve this.

Conventional methanol production is based on natural gas, while the chemically-identical bio-methanol is generated exclusively from renewable resources and even exceeds the international specifications published by the International Methanol Producers and Consumers Association. Glycerine is produced as a by-product of biodiesel production, and BioMCN's success is based on development of an innovative technology that converts this by-product into bio-methanol, thus closing the cycle.

The Dutch company is seeking to use its technology to reduce dramatically greenhouse gas emissions and increase security of supply.

As a fuel, bio-methanol can either be blended with petrol, or it can be used »

» as a feedstock for other environmentally friendly fuels thereby helping fuel manufacturers to achieve EU targets. (The European Parliament recently reduced its target that 10% of transport fuels should come from biofuels by 2020. It is keeping the 10% target, but only 6% should come from biofuels with the remainder generated by new technologies that pose less of a threat to food security and the environment.)

Bio-methanol is also used for a variety of non-fuel applications including plastics and paints. BioMCN says it is continually developing new applications, in alliance with other innovative companies and research institutes.

BioMCN is also one of the founding members of biofuelGO, a pan-European initiative to implement a certification system for biofuels that proves they are made from renewable resources, and provides additional information on sustainability and CO_2 emissions reduction.

Praising the company's development of an innovative technology that aims to have a real impact on curbing CO_2 emissions, the judges also noted that BioMCN appears to recognise the sensitivities associated with biofuels. It is committed to "responsible use" of raw materials and processes, and to avoiding potentially negative effects on food production and land use associated with some biofuels.

BioMCN plant for bio-methanol

Finding the right balance at BASF

In a clear message to stakeholders on the issue of climate change, BASF uses its Carbon Balance project to demonstrate that its products enable customers to save three times more greenhouse gas (GHG) emissions than the entire amount caused by production and disposal of all the company's products.

The calculations have been reviewed and confirmed by an independent third party, the Oeko-Institut in Freiburg, Germany.

The judging panel discussed this global project's qualification for the Responsible Care Awards which is primarily a site-focused scheme, but as one commented: "This company is walking the talk", and is addressing one of the main challenges faced by society.

BASF is the world's first company to present a comprehensive carbon balance for its operations by assessing the company's carbon footprint. It shows not only emissions from BASF production, but also takes into account emissions from raw materials and precursors, emissions generated during transport, and in the disposal of all products.

The company also notes it has increased production by 51% since 1990 and reduced its GHG emissions by 38% in absolute terms over the period. Furthermore, at 25m tonnes of CO_2 equivalents, less than half of the emissions generated over the lifecycle of BASF products are from its own production processes – the bulk comes from upstream and downstream steps in the value chain.

In addition, stated BASF in its submission for the Awards, the company has looked at the lifecycle of 90 key products that save CO_2 emissions when used in end products. In areas such as construction through, for example, insulating materials in housing and lighter weight plastics in automobiles, as well as industrial production, these products help BASF's customers to save more than 250m tonnes of CO_2 worldwide.

As well as publishing the Carbon Balance, BASF has appointed a climate protection officer and launched an action programme, setting goals of 25% for increasing energy efficiency and for reducing GHG emissions up to 2020 compared with 2002. More than a third of all research spending goes into energy efficiency, climate protection, saving resources and renewable resources.

The company says this is part of a cycle of continuous improvement that started with the definition of the BASF climate protection goals in 2003 and introduction of the Responsible Care Management System in 2007. BASF is openly sharing this approach with its peers, and wants to develop a standard way of calculating a company's carbon footprint.